FOOD SAFETY AND STANDARDS (FOOD PRODUCTS STANDARDS AND FOOD ADDITIVES) REGULATIONS, 2011

CHAPTER 1

GENERAL

1.1: Title and commencement

1.1.1: These regulations may be called1 **the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011**.

1.1.2: These regulatiions shall come into force on or after 5th August, 2011, "except regulations, 2.1.6(1)(2)(3), 2.1.7(1)(2)(3)(4), 2.1.12(1) and entries relating in table 14 of appendix A and table 2 of appendix B, which shall come into force after six months from that date and in regulation 2.1.8(1)(3) and 2.1.11(1)(2) only relating entries in table which shall come into force after six months from that date.

Provided that wherever the standards given in these regulatiofruit juivns are at variance with any of the provisions of the licenses already granted, Food Business Operator shall comply with the provisions of these regulations towards the standards relating to caramel and glazing agents within Forty-two months i.e. w.e.f. 5th February, 2015 from the date of commencement of these regulations.

1.2: Definitions

In these regulations unless the context otherwise requires:

1. [38][omitted].
2. "**De-oiled meal**" means the residual material left over when oil is extracted by a solvent from any oil-bearing material;
3. [38][omitted].
4. **"Hydrogenation"** means the process of addition of hydrogen to an edible vegetable oil using a catalyst to produce a fat with semi-solid consistency;
5. [38][omitted].
6. [38][omitted].
7. **'Irradiation'** means any physical procedure, involving the intentional exposure of food to ionizing radiations.
8. '**Irradiation facility'** means any facility which is capable of being utilized for treatment of food by irradiation.
9. '**Irradiated food'** means articles of food subjected to radiation by :—

   (i) Gamma Rays;

   (ii) X-rays generated from machine sources operated at or below an energy level of 5 million electron volts; and

   (iii) Sub-atomic particles, namely, electrons generated from machine sources operated at or below an energy level of 10 million electron volts, to dose levels as specified in Schedule I of the Atomic Energy (Control of Irradiation of Food) Rules 1991.
10. [38][omitted].
11. [38][omitted].
12. [38][omitted].

13. **"Margarine"** means an emulsion of edible oils and fats with water;

14. '**Operator of irradiation facility'** means any person appointed as such by licensee who satisfies the qualifications and requirements as for training specified in Schedule II of the Atomic Energy (Control of Irradiation of Food) Rules, 1991

15. [38]**[**omitted**].**

16. [38]**[**omitted**]**

17. [72][**"Refined vegetable oil**" means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or by physical refining and/or by miscella refining using permitted food grade solvents and/or degumming using phosphoric/citric acid and/or any suitable food grade enzyme followed by bleaching with adsorbent earth and/or activated carbon and deodorized with steam without using any other chemical agents.]

18. "**Refining**" means a process by which an expressed vegetable oil or a solvent-extracted oil is deacidified—

    (i) With alkali, or

    (ii) by physical refining, or both, or

    (iii) By miscella refining using permitted food grade solvent, followed by bleaching with absorbent earth and/or activated carbon or both of them and deodorized with steam without using any other chemical agent;

    (iv) refining if required may include the process of degumming using phosphoric/citric acid [26][and any suitable food grade enzyme].

19. [38]**[**omitted**].**

20. [38]**[**omitted**]**

21. [38]**[**omitted**]**

22. **"Solvent-extracted oil"** means any vegetable oil obtained from oil-bearing material by the process of extraction by a solvent;

23. **"Solvent-extracted edible flour"** means the ground material obtained from specially prepared deoiled meal, that is, the residual material left over when oil is extracted by a solvent from oil cake immediately following the single-pressing of good quality edible oilseeds;

24. [38]**[omitted]**

25. **"Vegetable oils" means oils** produced from oilcakes or oilseeds or oil-bearing materials of plant origin and containing glycerides;

26. **"Vegetable oil product"** means any product obtained for edible purposes by subjecting one or more edible oils to any or a combination of any of the processes or operations, namely, refining, blending, hydrogenation or interesterification and winterization (process by which edible fats and oils are fractioned through cooling), and includes any other process which may be notified by the Central Government in the official Gazette.

Amendment for insertion of new provision

[77]**[27. "Raw edible oils"** are obtained by mechanical procedures e.g expelling and pressing, with or without application of heat. The expelled/pressed oil may be purified by washing with water, settling, filtering and centrifuging. No processing aid shall be used. Such oils are fit for human consumption. They shall conform to the provisions mentioned under sub-regulation 2.2.1 prescribed for specific vegetable oil except the standards laid down under regulation 2.2.1 (16)].

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

CHAPTER 2
FOOD PRODUCT STANDARDS

[38][2.1 DAIRY PRODUCTS AND ANALOGUES

2.1.1 General Standards for Milk and Milk Products

The general standard provides over-arching definitions for milk and milk products and guidance on the use of dairy terms in relation to foods to be offered to the consumer or for further processing.

1. Definitions. -

(a) "Boiling, boiled and similar terms" when used in association with milk, shall be taken to refer to the process of heating milk continuously to bring it to boil at atmospheric pressure;

Amendment for insertion of new provision

[78]["(aa) Analogue in the dairy context, as referred to in the Regulation 2.1, means a product in which constituents not derived from milk take the place, in part or in whole, of any milk constituent(s) and the final product resembles, organoleptically and/or functionally, milk or milk product or composite milk product as defined in these regulations."

Note: The admixtures of certain dairy products and other ingredients not exclusively derived from milk, sale of which are prohibited as per Food Safety and Standards (Prohibition and Restriction on Sales) Regulations, 2011 are excluded from this definition."]

[Amendment in force from 27th December, 2021; FBOs to comply with the provisions by 1st July, 2022]

(b) "Composite milk product" means a product of which the milk, milk products or milk constituents shall be an essential part in terms of quantity in the final product, as consumed:

Provided that the constituents not derived from milk shall not take the place in part or in whole of any milk constituent. Examples of composite milk products are:

(i) *Shrikhand* with fruits etc.*;*
(ii) ice cream containing fruits etc.;
(iii) flavoured fermented milks;
(iv) Drinks based on fermented milks

(c) "Dairy terms" means names, designations, symbols, pictorial or other devices which refer to

or are suggestive, directly or indirectly, of milk or milk products;

(d) "Heat treatment" means pasteurization, ultra-pasteurization, sterilisation, ultra-high temperature treatment or boiling;

(e) "Milk" means the normal mammary secretion derived from complete milking of healthy milch animal, without either addition thereto or extraction therefrom, unless otherwise provided in these regulations and it shall be free from colostrum;

(f) "Milk Product" means a product obtained by processing of milk, which may contain food additives and other ingredients functionally necessary for the milk product as permitted in these regulations and shall include the following, namely:-

(i) cheese;

(ii) *chhana*, skimmed-milk *chhana*, *paneer*;

(iii) condensed milk-sweetened and unsweetened;

(iv) condensed skimmed milk-sweetened and unsweetened;

(v) cream;

(vi) curd, skimmed milk curd, *dahi*;

(vii) *ghee*, butter oil;

(viii) ice-cream;

(ix) infant milk food;

(x) *khoa*;

(xi) *malai*;

(xii) milk derivatives such as whey proteins, casein, lactose etc.;

(xiii) milk ices, milk lollies, *kulfi*;

(xiv) milk powder, skimmed milk powder, partly skimmed milk powder;

(xv) processed cheese;

(xvi) table butter and white butter;

(xvii) yoghurt;

(xviii) any other product as may be specified in these regulations:

Provided that milk products shall not contain any substance not found in milk unless specified in these regulations;

(g) "Pasteurization, Pasteurized and similar terms" means a microbicidal heat treatment aimed at reducing the number of any pathogenic micro-organisms in milk and liquid milk products, if present, to a level at which they do not constitute a significant health hazard. Pasteurization conditions shall be designed to effectively destroy the organisms *Mycobacterium tuberculosis* and *Coxiella burnettii*.

Pasteurization, when used in association with milk, shall be taken to

refer to the typical process of heating every particle of milk to at least 63^0C and holding at such temperature continuously for at least thirty minutes or heating it to at least 72^0C and holding at such temperature continuously for at least fifteen seconds, or any other temperature-time combination, sufficient to give a microbicidal effect equivalent to the above defined temperature-time combination and serve to give a negative Phosphatase Test that is applicable to milk immediately after pasteurization only, and cooling it immediately to a temperature of 4^0C, or less;

(h) "Recombined milk or milk product" means a product resulting from the combination of milk fat and milk-solids-non-fat in their preserved forms with or without the addition of potable water to achieve similar end product characteristics and appropriate milk product composition as per the Standard for that product and in the case of recombined milk, the source of milk-solids-non-fat shall be dried or concentrated milks only;

(i) "Reconstituted milk or milk product" means a product resulting from the addition of potable water to the dried or concentrated form of milk or milk products in the amount necessary to re-establish the appropriate water-to-solids ratio to achieve similar end product characteristics and appropriate milk product composition as per the standards for that product;

(j) "Sterilisation, sterilised and similar terms" means application of heat at high temperatures for a time sufficient to render milk or milk products commercially sterile, thus resulting in products that are safe and microbiologically stable at room temperatures.

(i) "Sterilisation" when used in association with milk or milk products, shall be taken to refer to the typical process of heating milk or milk product in sealed containers continuously to at least 115ºC for fifteen minutes to ensure preservation at room temperature for a period not less than thirty days from the date of manufacture;

(ii) "Ultra High Temperature (UHT) sterilisation/treatment" when used in association with milk or milk products, shall be taken to refer to the typical process of heating milk or milk product to at least 135ºC for one second or more in a continuous flow and then packing under aseptic condition in hermetically sealed containers to ensure preservation at room temperature for a period of not less than fifteen days from the date of manufacture.

2. **General Principles.-** Foods shall be described or presented in such a manner as to ensure the correct use of dairy terms intended for milk and milk products, to protect consumers from being confused or misled and to ensure fair practices in the food trade.

3. **Application of Dairy Terms.-**

(a) General requirements.-

The name of the food shall be declared in accordance with these regulations.

(b) Use of the term “milk”.-

(i) Only a food complying with the requirement as specified in sub-item (e) of item 1 of this sub-regulation may be named “milk”;

(ii) Milk which is adjusted for milk fat or milk solid-not-fat content or both, may also be named “milk” provided that the minimum and maximum limits of milk fat and milk solid-not-fat content (as the case may be) of the adjusted milk as specified in sub-regulation 2.1.2 (Standard for Milk).

(c) Use of the names of milk products in food standards. -

(i) a product complying with the standards of a milk product as specified in these regulations may be named accordingly;

(ii) notwithstanding the provisions of entry (i) above, the relevant milk product when manufactured from milk, the fat or protein content, or both, of which have been adjusted, provided that the compositional criteria in the relevant standard are met, may be named as specified in these regulations;

(iii) products that are modified through addition or withdrawal of milk constituents may be named with the name of the relevant milk product in association with a clear description of the modification to which the milk product has been subjected:

Provided that the essential product characteristics are maintained and that the limits of such compositional modifications have been provided for in the standards concerned as appropriate (for example ‘lactose reduced’ milk or milk products, ‘cholesterol free’ ghee, etc.).

(d) Use of terms for reconstituted and recombined milk and milk products. -Milk and milk products may be named as specified in these regulations for the relevant milk products when made from recombined or reconstituted milk or from recombination or reconstitution of milk products.

(e) Use of dairy terms for composite milk products. -A product complying with the description given in sub-item(b) of item 1 of sub-regulation 2.1.1 may be named with the term “milk” or the name specified for a milk product as appropriate, provided that a clear description of the other characterising ingredient(s) (such as flavouring foods, spices, herbs and flavours) is given in close proximity to the name.

(f) Use of dairy terms for other foods.-

(i) the names referred to in sub-items (b), (c), (d) and (e) of item 3 of sub-regulation 2.1.1 may be used as names or in the labelling of milk, milk products or composite milk products;

Amendment for insertion of new provision

[78]["Provided that for the purpose of these Regulations, 'Analogues in the dairy context' are not considered milk, milk products or composite milk products as defined in these regulations."]

[Amendment in force from 27th December, 2021; FBOs to comply with the provisions by 1st July, 2022]

(ii) in respect of a product which is not milk, a milk product or a composite milk product, no label, commercial document, publicity material or any form of point of sale presentation shall be used which claims, implies or suggests that the product is milk, a milk product or a composite milk product, or which refers to one or more of these products:

Amendment for insertion of new provision

[78][unless provided otherwise in these regulations or other relevant regulations established by the Food Authority.]

[Amendment in force from 27th December, 2021; FBOs to comply with the provisions by 1st July, 2022]

Provided that products which contain milk or milk products, or milk constituents, which are an essential part for characterisation of the product, the term "milk", or the name of a milk product may be used in the description of the true nature of the product.

Provided further that the constituents not derived from milk are not intended to take the place, in part or in whole, of any milk constituent:

Provided also that if the final product is intended to substitute milk, a milk product or composite milk product, dairy terms shall not be used:

Provided also that the products which contain milk, or a milk product, or milk constituents, which are not an essential part in terms of characterisation of the product, dairy terms shall only be used in the list of ingredients. For these products, dairy terms shall not be used for other purposes.

4. **Addition of Essential Nutrients**.- Milk and milk products may be enriched/ fortified with essential nutrients such as vitamins, minerals, etc., as specified in these regulations including labelling requirements.

5. **Labelling of pre-packaged foods.-** Pre-packaged milk, milk products and composite milk products shall be labeled in accordance with these regulations, except to the extent otherwise expressly provided in item 3 of this sub-regulation.

Amendment for insertion of new provision

[78][(a) "All milk and milk products, including composite milk products, as defined in sub-item b, e, f, h and i of item 1 of this sub-regulation shall exclusively use the following logo on the product label.

";

(b) Following declaration shall be made on the label of 'Analogues in the dairy context', in close proximity of the name of the product, namely:

"(a) In respect of each such constituent not derived from milk that takes place of a milk constituent in the product:

"Contains ....."

Blank to be filled with name of the constituent including the source

(b) In respect of each such milk constituent whose place is fully taken over by a constituent not derived from milk in the product:

"Contains no milk ....."

Blank to be filled with name of the constituent"]

[Amendment in force from 27th Decemer, 2021; FBOs to comply with the provisions by 1st July, 2022]

6. **Use of probiotics and prebiotics**.- For the use of probiotics and prebiotics in dairy products, the provisions specified in the Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, Functional Food and Novel food) Regulations, 2016 shall apply.

7. **Use of enzymes.-** Safe and suitable enzymes may be used as processing aids in milk and milk products as specified in individual standards for milk and milk products under these regulations.

2.1.2 Standard for Milk

This Standard applies to milk as defined in item 1 of this sub-regulation.

1. Description.-

(a) "Species identified milk" means milk as defined under the General Standard for Milk and Milk Products. The fat and SNF content of species identified milk specified under this regulation (namely buffalo milk, cow milk, goat milk, sheep milk and camel milk) shall conform to the respective composition given in sub-item (b) of item 2 and product may be subjected to pasteurization, boiling, sterilisation or Ultra High Temperature sterilisation/treatment.

(b) "Mixed Milk" means any combination of species identified milk specified under these regulations. The fat and SNF content of mixed milk shall conform to the standards given in the table under sub- item (b) of item 2 below. The product may be subjected to pasteurization, boiling, sterilisation or Ultra High Temperature sterilisation/treatment.

(c) "Full Cream Milk, Standardised Milk, Toned Milk, Double Toned Milk, or Skimmed Milk" means the product prepared from cow milk, buffalo milk or milk of any other species as defined under this regulation, reconstituted milk, recombined milk, or any combination of these milks, with or without dried or concentrated milks or milk fat that has been standardised to the respective fat and solids-not-fat percentage given in sub-item (b) of item 2. It shall remain homogeneous and no deposition of solids shall take place on standing. The product shall be subjected to pasteurization, sterilisation, Ultra High Temperature sterilisation/treatment or boiling.

[68][(d) Low Lactose or Lactose free milk.-

Description.- Low Lactose or Lactose free milk means the product prepared from any type of milk specified in sub-item (a), (b) and (c)above, in which, lactose content has

been reduced significantly through hydrolysis by enzymatic or any other appropriate process. The fat and SNF content of milk used for preparation shall conform to the respective composition given in table under sub-item (b) of item 2. The product may be subjected to pasteurization, boiling, sterilisation or ultra-high temperature and shall conform to the following requirements:-

(i) "Low lactose milk" shall have less than 1% lactose; and

(ii) "Lactose free milk" shall have less than 0.1% lactose.']

2. Essential Composition and Quality Factors.-

(a) Raw Material.-

Raw material used shall be as per the respective definitions in item 1 of this sub-regulation.

(b) Composition.-

The milk of different classes shall conform to the requirements for milk fat and milk solids-not-fat, independently, as specified in columns (4) and (5) of the table given below

Table

Sr. No	**Class of Milk.**	**Locality or State or Area.**	**Minimum Milk Fat (per cent, m/m).**	**Minimum Milk Solids- not-Fat (SNF) (per cent, m/m).**
(1)	(2)	(3)	(4)	(5)
1.	Buffalo Milk	Assam Bihar Chandigarh Delhi Gujarat Haryana Jharkhand Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh Uttarakhand West Bengal	6.0	9.0

Sr. No	Class of Milk.	Locality or State or Area.	Minimum Milk Fat (per cent, m/m).	Minimum Milk Solids- not-Fat (SNF) (per cent, m/m).
		Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Chhatisgarh Dadra and Nagar Haveli Goa Daman and Diu Himachal Pradesh Jammu and Kashmir Karnataka Kerala Lakshadweep Madhya Pradesh Manipur Mizoram Nagaland Odisha Puducherry Rajasthan Tamil Nadu Telangana Tripura	5.0	9.0

Amendment for substitution of highlighted provision

Sr. No	Class of Milk.	Locality or State or Area.	Minimum Milk Fat (per cent, m/m).	Minimum Milk Solids- not-Fat (SNF) (per cent, m/m).
[75][1.	Buffalo Milk	All India	5.0	9.0]
[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]				
2.	Cow Milk	All India	3.2	8.3
3.	[62][Goat or Sheep Milk	All India	3.0	8.0]
4.	Camel Milk	All India	2.0	6.0
5.	Mixed Milk	All India	4.5	8.5
6.	Standardized Milk	All India	4.5	8.5
7.	Toned Milk	All India	3.0	8.5
8.	Double Toned Milk	All India	1.5	9.0
9.	Skimmed Milk	All India	Not more than 0.5	8.7
10.	Full Cream Milk	All India	6.0	9.0

Note(s):

(i) When any class of milk is offered for sale in contravention of the requirements specified under this sub-item, the standards prescribed for mixed milk shall apply.

(ii) These standards would only be applicable at the points of sale.

[62][(iii) Total sodium content in the milk shall not be more than 650mg/100gm SNF.]

3. Food Additives. -

Milk shall not contain any food additives:

Provided that the products specified in sub-item (c) of item 1 of this sub-regulation may contain carry over food additives specified in the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011:

Provided further that in sterilised milk, the specific food additives permitted in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

(a) The products shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

(b) The total urea content in milk shall not be more than 700 ppm.

5. Hygiene. -

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006;

(b) The products shall conform to the microbiological requirements given in Appendix 'B' of these regulations.

6. Labelling. -

(a) The following details shall be declared on the label of pre-packaged milk or otherwise if the milk is not pre-packaged and is offered for sale to the consumer, such declaration shall be given on the container from which milk is offered for sale to the consumer:

(i) the class of milk as per column 2 of table under sub-item (b) of item 2 of sub-regulation 2.1.2;

(ii) the heat treatment, as per the item (1) of sub-regulation 2.1.2, to which product has been subjected to.

68[(aa) In case of low lactose or lactose free milk, the name of the product may be Low Lactose or Lactose Free.....milk, wherein the blank will be filled by the name of the respective milk from which it is prepared.]

(b) If the milk from any milch animal, mixed milk or skimmed milk is offered for sale to the consumer without any heat treatment, the name of the milk shall be declared on the label of pre-packaged milk; or otherwise if the milk is not pre-packaged, the name of the milk shall be declared and mentioned on the container from which milk shall be offered for sale to the consumer and shall be preceded with the term 'Raw'.

(c) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged milk:

Provided that the list of ingredients may not be declared in descending order of usage since the proportion of ingredients used may require change on a daily basis:

Provided further that where 'reconstituted' or 'recombined' milk is declared in the list of ingredients, their components need not be declared separately.

7. Method of Sampling and Analysis. -

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.3 Standard for Flavoured Milk

This Standard applies to Flavoured Milk as defined in item 1 of this sub-regulation.*

1. Description. -

"Flavoured Milk" means the product prepared from milk or other products derived from milk, or both, and edible flavourings with or without addition of sugar, nutritive sweeteners, other non-dairy ingredients including, stabilisers and food colours. Flavoured milk shall be subjected to heat treatment as provided in sub-regulation 2.1.1 (General Standards for Milk and Milk Products).

Where flavoured milk is dried or concentrated, the dried or concentrated product on addition of prescribed amount of water shall give a product conforming to the requirements of flavoured milk.

2. Essential Composition and Quality Factors.-

(a) Raw Material. -

(i) Milk
(ii) Concentrated and dried milk
(iii) Milk fat, cream, butter and butter oil
(iv) Potable water for use in reconstitution or recombination

(b) Permitted ingredients. -

(i) Sugar or other nutritive sweeteners or both;

(ii) Other non-dairy ingredients like nuts (whole, fragmented or ground), cocoa solids, chocolate, coffee, fruits and vegetables and products thereof including juices, purees, pulps, preparations and preserves derived therefrom, cereals, and cereal products and cereal based extracts, honey, spices, condiments, salt, and other natural flavouring foods and flavours;

(iii) Potable water.

(c) Composition. -

Flavoured Milk shall have the same minimum percentage of milk fat and milk solids-not-fat as that of the milk, as provided for in the Standard for Milk, from which it is prepared.

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

3. Food Additives. -

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

(a) The name of the product shall be 'Flavoured Milk'.

(b) The following details shall be always declared on the label of pre-packaged product or otherwise if the product is not pre-packaged, in respect of the product offered for sale: -

(i) the class of milk as per General Standard for Milk and Milk Products from which it is prepared;
(ii) the heat treatment, as per the General Standard for Milk and Milk Products, to which product has been subjected to;

(c) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged products.

7. Method of Sampling and Analysis. -

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.4 Standard for Evaporated or Concentrated Milk

This Standard applies to Evaporated Milk as defined in item 1 of this sub-regulation*.

1. Description.-

Evaporated Milk means the product obtained by partial removal of water from milk by heat or any other process which leads to a product of the same composition and characteristics. The fat and protein content of the milk may be adjusted, only to comply with the compositional requirements in sub-item (c) of item 2 of this Standard, by addition or withdrawal of milk constituents in such a way as not to alter the whey protein to casein ratio of the milk being adjusted.

2. Essential Composition and Quality Factors.-

(a) Raw materials.-

i) Milk and milk powders, cream and cream powders, milk fat products;

ii) The following milk products are allowed for protein adjustment purposes, only in product covered by item 1 of this sub-regulation.

– "Milk retentate" means the product obtained by concentrating milk protein by ultrafiltration of milk, partly skimmed milk, or skimmed milk;

(b) Permitted ingredients.-

– Potable water; and
– Sodium chloride.

(c) Composition.-

The product shall conform to the compositional specifications provided in the table below:

Parameter	Evaporated milk	Evaporated partly skimmed milk	Evaporated skimmed milk	Evaporated high fat milk
Milk fat, %, (m/m)	7.5 (minimum)	More than 1 and Less than 7.5	1.0 (maximum)	15.0 (minimum)

*This standard should be read along with the sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

Parameter	Evaporated milk	Evaporated partly skimmed milk	Evaporated skimmed milk	Evaporated high fat milk
Milk solids, minimum, %, (m/m)	25.0	20.0	20.0	26.5
Milk protein* in milk solids-not fat, minimum, %, (m/m)	34.0	34.0	34.0	34.0

* Protein content is 6.38 multiplied by the total nitrogen determined

3. Food Additives.-

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues.-

The products shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling.-

(a) According to the definitions in item 1 and composition in sub-item (c) of item 2, the name of the food shall be:

(i) evaporated milk, or

(ii) evaporated partly skimmed milk, or

(iii) evaporated skimmed milk, or

(iv) evaporated high fat milk, and as appropriate:

Provided that the "evaporated partly skimmed milk" may be designated "evaporated semi-skimmed milk" when the content of milk fat is between 4.0 - 4.5 % (m/m) and minimum milk solids is 24% (m/m).

(b) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged products.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.5 Standard for Sweetened Condensed Milk

This Standard applies to sweetened condensed milk as defined in item 1 of this sub-regulation.*

1. Description.-

Sweetened Condensed Milk is the product obtained by partial removal of water from milk with the addition of sugar or a combination of sucrose with other sugars, or by any other process which leads to a product of the same composition and characteristics. The fat or protein content or both of the milk may be adjusted, only to comply with the compositional requirements in sub- item (c) of item 2 of this Standard, by addition or withdrawal of milk constituents in such a way as not to alter the whey protein to casein ratio of the milk being adjusted.

2. Essential Composition and Quality Factors.-

(a) Raw materials.-

i) Milk and milk powders, cream and cream powders, milk fat products;

ii) Lactose (for seeding purposes);

iii) The following milk products are allowed for protein adjustment purposes.-

– Milk retentate: Milk retentate is the product obtained by concentrating milk protein by processes like ultrafiltration of milk, partly skimmed milk, or skimmed milk.

(b) Permitted ingredients.-

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

– potable water;

– sugar (In this product, sugar is generally considered to be sucrose, but a combination of sucrose with other sugars, consistent with Good Manufacturing Practice, may be used); and
– Sodium chloride.

(c) Composition.-

The product shall conform to the compositional specifications provided in the table below:

Parameter	Sweetened condensed milk	Sweetened condensed partly skimmed milk	Sweetened condensed skimmed milk	Sweetened condensed high fat milk
Milk fat, %, (m/m)	8.0 (minimum)	More than 1.0 and less than 8.0	1.0 (maximum)	16.0 (minimum)
Milk solids, minimum, %, (m/m)	28.0	24.0	24.0	--
Milk solid not fat, minimum, %, (m/m)	--	20.0	--	14.0
Milk protein* in milk solids-not-fat, minimum, %, (m/m)	34.0	34.0	34.0	34.0

* Protein content is 6.38 multiplied by the total nitrogen determined

3. Food Additives.-

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues.-

The products shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling.-

(a) According to the definitions in item 1 and composition in sub-item (c) of item 2, the name of the food shall be:-

(i) Sweetened condensed milk, or

(ii) Sweetened condensed partly skimmed milk, or

(iii) Sweetened condensed skimmed milk, or

(iv) Sweetened condensed high fat milk, as appropriate:

Provided that the "Sweetened condensed partly skimmed milk" may be designated "Sweetened condensed semi-skimmed milk", if the content of milk fat is between 4.0 - 4.5 % (m/m) and minimum milk solids is 28 % (m/m);

(b) Sweetened condensed milks which are not suitable for infant feeding shall not contain any instruction of modifying them for infant feeding;

(c) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.6 Standard for *Khoa*

This Standard applies to *Khoa* as defined in item 1 of this sub-regulation.[1]

1. Description. -

Khoa by whatever name it is sold such as *Khoa* or *Mawa* or any other region specific popular name means the product obtained by partial removal of water from any variant of milk with or without added milk solids by heating under controlled conditions.

[1] This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

2. Essential Composition and Quality Factors. -

(a) Raw materials. -

Milk and milk powders, cream and cream powder and milk fat products.

(b) Composition. –

The product shall conform to the compositional specifications provided in the table below:

Parameter	*Khoa*
Total solids, minimum, %, (m/m)	55.0
Milk fat, minimum, %, (m/m), dry matter basis	30.0
Total ash, maximum, %, (m/m)	6.0
Titratable acidity (as % lactic acid), maximum, %	0.9

It shall be free from added starch and added sugar.

The extracted fat from *Khoa* shall meet the standards for Reichert Meissl value, Polenske value and Butyro-refractometer reading as prescribed for ghee.

3. Food Additives. -

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits stipulated under the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

(a) The name of the food shall be '*Khoa*' or '*Mawa'* or any other region specific popular name.

(b) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis. –

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.7 Standard for Cream and *Malai*

This Standard applies to Cream and *Malai* as defined in item 1 of this sub-regulation[2].

1. Description. -

(a) "Cream" means the fluid product comparatively rich in fat, in the form of an emulsion of fat-in-skimmed milk, obtained by physical separation from cow milk, buffalo milk or milk of any other species as defined under this regulation or a mixture thereof.

(b) "Reconstituted cream" means cream obtained by reconstituting milk products with or without the addition of potable water and with the same end product characteristics as the product described in sub-item (a) of item 1 of this sub-regulation.

(c) "Recombined cream" means cream obtained by recombining milk products with or without the addition of potable water and with the same end product characteristics as the product described in sub-item (a) of item 1 of this sub-regulation.

(d) "Prepared creams" means the milk products obtained by subjecting cream, reconstituted cream or recombined cream or any combination of these, to suitable treatments and processes to obtain the characteristic properties as specified below:-

(i) "pre-packaged liquid cream" means the fluid milk product obtained by preparing and packaging cream, reconstituted cream or recombined cream, or any combination of these for direct consumption or for direct use as such;

[2] This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

(ii) "whipping cream" means the fluid cream, reconstituted cream and recombined cream or any combination of these, that is intended for whipping. When cream is intended for use by the final consumer the cream should have been prepared in a way that facilitates the whipping process;

(iii) "cream packed under pressure" means the fluid cream, reconstituted cream and recombined cream or any combination of these that is packed with a propellant gas in a pressure-propulsion container and which becomes Whipped Cream when removed from that container;

(iv) "whipped cream" means the fluid cream, reconstituted cream or recombined cream in to which air or inert gas has been incorporated without reversing the fat-in-skimmed milk emulsion;

(v) "fermented/cultured/sour cream" means the milk product obtained by fermentation of cream, reconstituted cream or recombined cream, by the action of suitable micro-organisms that results in reduction of pH with or without coagulation. Where the content of (a) specific microorganism(s) is(are) indicated, directly or indirectly, in the labelling or otherwise indicated by content claims in connection with sale, these shall be present, viable, active and abundant in the product to the date of minimum durability. If the product is heat treated after fermentation the requirement for viable micro-organisms shall not apply;

(vi) "acidified cream" means the milk product obtained by acidifying cream, reconstituted cream or recombined cream, or any combination of these, by the action of acids or acidity regulators, or both to achieve a reduction of pH with or without coagulation.

(e) "*Malai"* means the product rich in milk fat prepared by boiling and cooling of cow milk, buffalo milk or milk of any other species as defined under this regulation or a mixture thereof. It is characterized by presence of insoluble mass, principally fat and denatured protein, formed on heating and cooling of milk.

2. Essential Composition and Quality Factors.-

(a) Raw Material.-

All creams, prepared creams and *malai.*-

- Milk, which may have been subjected to mechanical and physical treatments prior to cream processing;
- Additionally, for creams made by reconstitution or recombination.-

  Butter, milk fat products, milk powders, cream powders, and potable water. The milk product should conform to the relevant Food Safety Standards or Regulations;

- Additionally, for prepared creams described in entries (ii) to (vi) of sub-item (d) of item 1;

The product that remains after the removal of milk fat by churning milk and cream to manufacture butter and milk fat products (often referred to as buttermilk) and that may have been concentrated or dried.

(b) Permitted ingredients.-

Only those ingredients listed below may be used for the purposes and product categories specified, and only within the limitations specified. The product shall be free from any ingredient foreign to milk except otherwise provided in this standard.

For use in products only for which stabilizers or thickeners, or both, are justified (see item 3):

– Products derived exclusively from milk or whey and containing 35.0% (m/m) or more of milk protein of any type (including casein and whey protein products and concentrates and any combinations thereof) and milk powders; these products can be used in the same function as thickeners and stabilizers, provided they are added only in amounts functionally necessary not exceeding 20.0 g/kg, taking into account any use of the stabilizers and thickeners permitted as per the Food Safety and Standards (Food Products Standards and Food Additives) Regulation, 2011;

Additionally, for use in fermented cream, only.-

– Starter cultures of harmless micro-organisms;

Additionally, for use in fermented cream and acidified cream, only.-

– Non-animal rennet and other safe and suitable coagulating enzymes to improve texture without achieving enzymatic coagulation;
– Sodium chloride.

(c) Composition.-

The product shall contain minimum 10.0 per cent. (m/m) milk fat. Acidity of the finished products, other than fermented and acidified creams, should not be more than 0.15 % (as lactic acid).

3. Food Additives.-

For products covered under this standard, specific food additives permitted in Appendix ‘A’ of these regulations may be used and only within the limits specified:

Provided that stabilizers, acidity regulators, thickeners and emulsifiers may be used when needed to ensure product stability and integrity of the emulsion, taking into consideration the fat content and durability of the product. With regard to the durability, special consideration should be given to the level of heat treatment applied since some minimally pasteurized products do not require the use of certain additives.

4. Contaminants, Toxins and Residues. -

The products shall comply with Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

(a) The name of the food shall be as specified in item 1 of this Standard, as appropriate.

However, "pre-packaged liquid cream" may be designated as "cream" and "cream packed under pressure" may be designated by another descriptive term that refers to its nature or intended use or as "Whipped Cream". The term "prepared cream" should not apply as a designation. The type of cream and the fat content in cream shall be always indicated on the label or in case of non-pre-packaged product; such declaration to be given on the container from which product will be offered for sale to the consumer. Creams which have been manufactured by the recombination or reconstitution of dairy ingredients shall be qualified with the term "Recombined" or "Reconstituted" as appropriate.

If the product conforms to the description in sub-item (e) of item 1, the name of the product shall be '*Malai'.*

(b) Cream may be labelled according to milk fat content (m/m) along with product name as specified in item 1 of this Standard, as follows,-

(i) Low fat cream: Minimum 10 per cent. and less than 40 per cent.;
(ii) Medium fat cream: Minimum 40 per cent. and less than 60 per cent.;
(iii) High fat cream: Minimum 60 per cent.

(c) Labels on packages of fermented creams may include reference to the starter culture used for fermentation.

(d) The heat treatment, as per the sub-regulation 2.1.1 relating to General Standards for Milk and Milk Products, to which the product has been subjected to, shall be declared on the label.

(e) In addition to the above-mentioned labelling requirements, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.8 Standard for Milk Fat Products.-

This Standard applies to milk fats including anhydrous milk fat, anhydrous butter oil, butter oil and ghee as defined in item 1 of this sub-regulation*

1. Description. -

Milk fat, *ghee*, butter oil, anhydrous milk fat and anhydrous butter oil are fatty products derived exclusively from milk or products obtained from milk, or both, by means of processes which result in almost total removal of water and milk solids-not-fat.

Ghee has especially developed flavour and physical structure as a result of its method of manufacturing.

2. Essential Composition and Quality Factors.-

(a) Raw Material.-

Milk and products obtained from milk. The raw material used shall be free from added flavour, colour or preservative.

(b) Composition.-

The standards of quality of milk fat, butter oil, anhydrous milk fat, anhydrous butter oil and ghee shall conform to the following requirements: −

* This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

Parameter	Milk Fat, Butter Oil	Anhydrous Milk Fat, Anhydrous Butter Oil	Ghee
Moisture, maximum, %, (m/m)	0.4	0.1	0.5
Milk fat, minimum, %, (m/m)	99.6	99.8	99.5
Butyro-refractometer Reading at 40 ^{0}C	40.0 to 44.0	40.0 to 44.0	As per table for *Ghee* below
Reichert Meissl Value, minimum	28.0	28.0	
Polenske Value	1.0-2.0	1.0-2.0	-
FFA as Oleic Acid, maximum, %	0.4	0.3	3.0
Peroxide Value (Milli-equivalent of Oxygen/Kg fat), maximum	0.6	0.3	-
Baudouin Test	Negative	Negative	Negative

Additionally, the Butyro- refractometer reading and Reichert Meissl value of *ghee* produced in a State or Union territory specified in column (1) of the table below shall be as specified against the said State or Union Territory in the corresponding columns (2) and (3) of the said table.

Name of State or Union Territory	**Butyro- refractometer reading at 40 ^{0}C**	**Minimum Reichert Meissl value**	**Polenske Value**
(1)	(2)	(3)	(4)
Andhra Pradesh/ Telangana	40.0 to 43.0	24.0	-
Andaman and Nicobar Islands	41.0 to 44.0	24.0	-
Arunachal Pradesh	40.0 to 43.0	26.0	-
Assam	40.0 to 43.0	26.0	-
Bihar	40.0 to 43.0	28.0	-
Chandigarh	40.0 to 43.0	28.0	-
Chhattisgarh	40.0 to 44.0	26.0	-
Dadra and Nagar Haveli	40.0 to 43.0	24.0	-

Name of State or Union Territory	Butyro- refractometer reading at 40 ^{0}C	Minimum Reichert Meissl value	Polenske Value
Delhi	40.0 to 43.0	28.0	-
Goa	40.0 to 43.0	26.0	-
Daman and Diu	40.0 to 43.5	24.0	-
Gujarat (a) Areas other than cotton tract areas (b) Cotton tract areas	40 to 43.5 41.5 to 45	24.0 21.0	-
Haryana (a) Areas other than cotton tract areas (b) Cotton tract areas	40.0 to 43.0 40.0 to 43.0	28.0 26.0	-
Himachal Pradesh	40.0 to 43.0	26.0	-
Jammu and Kashmir	40.0 to 43.0	26.0	-
Jharkhand	40.0 to 43.0	28.0	-
Karnataka- (a) Areas other than Belgaum district (b) Belgaum district	40.0 to 43.0 40.0 to 44.0	24.0 26.0	-
Kerala	40.0 to 43.0	26.0	-
Lakshadweep	40.0 to 43.0	26.0	-
Madhya Pradesh- (a) Areas other than cotton tract areas (b) Cotton tract areas	40.0 to 44.0 41.5 to 45.0	26.0 21.0	-
Maharashtra- (a) Areas other than	40.0 to 43.0	26.0	-

Name of State or Union Territory	Butyro- refractometer reading at 40 ^{0}C	Minimum Reichert Meissl value	Polenske Value
cotton tract areas (b) Cotton tract areas	41.5 to 45.0	21.0	
Manipur	40.0 to 43.0	26.0	-
Meghalaya	40.0 to 43.0	26.0	-
Mizoram	40.0 to 43.0	26.0	-
Nagaland	40.0 to 43.0	26.0	-
Odisha	40.0 to 43.0	26.0	-
Pudducherry	40.0 to 44.0	26.0	-
Punjab	40.0 to 43.0	28.0	-
Rajasthan- a) Areas other than Jodhpur District b) Jodhpur District	40.0 to 43.0 41.5 to 45.0	26.0 21.0	-
Tamil Nadu	41.0 to 44.0	24.0	-
Tripura	40.0 to 43.0	26.0	-
Uttar Pradesh	40.0 to 43.0	26.0	-
Uttarakhand	40.0 to 43.0	26.0	-
West Bengal- a) Areas other than Bishnupur Sub-Division b)Bishnupur Sub-Division	40.0 to 43.0 41.5 to 45.0	28.0 21.0	-
Sikkim	40.0 to 43.0	28.0	-

Explanation: By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

Amendment for Substitution of new provision

[78]["Parameter	Milk Fat, Butter Oil	Anhydrous Milk Fat, Anhydrous Butter Oil	Ghee
Moisture, maximum, %, (m/m)	0.4	0.1	0.5
Milk fat, minimum, %, (m/m)	99.6	99.8	99.5
Butyro-refractometer Reading at 40 ˚C	40.0 to 44.0	40.0 to 44.0	40.0 to 44.0
Reichert Meissl Value, minimum	24.0	24.0	24.0
Polenske Value	0.5 -2.0	0.5 -2.0	0.5 -2.0
FFA as Oleic Acid, maximum, %	0.4	0.3	2.0
Peroxide Value (Milli-equivalent of Oxygen/Kg fat), maximum	0.6	0.3	-
Baudouin Test	Negative	Negative	Negative
Iodine Value	-	-	25-38
Saponification value	-	-	205-235
Presence of β-sitosterol	Absent*	Absent*	Absent*
Fatty acid composition	-	-	The product shall meet the requirement of Table 1

*Method for determination of adulteration of vegetable oil in ghee by RP-HPLC as notified vide FSSAI Office Order: File No. 1-90/FSSAI/SP (MS&A)/2009 dated 25th March, 2019

[Amendment in force from 27th December, 2021; FBOs to comply with the provisions, except Fatty Acid Composition given in above table by 1st July, 2022,]

Table 1. The fatty acid composition of ghee as determined by GLC (expressed as percentage of total fatty acids)

Type of fatty acid	Fatty acid composition (percentage)
Saturated fatty acids	
C4:0, Butyric acid	1 -5
C6:0, Hexanoic acid (Caproic acid)	0.5 – 2.2
C8:0, Octanoic acid (Cacprylic acid)	0.4 – 1.5
C10:0, Decanoic acid (Capric acid)	0.8- 5
C12:0, Dodecanoic acid (Lauric acid)	1.5 - 4
C14:0, Tetradecanoic acid (Myristic acid)	6- 13
C16:0, Hexadecanoic acid (Palmitic acid)	22-38
C18:0, Octadecanoic acid (Stearic acid)	8-19
Mono- unsaturated fatty acids	
C16:1 (Cis 9), (Hexadecanoic acid (Palmitoleic acid)	0.9-2.8
C18:1 (cis 9) 9-Octadecenoic acid (Oleic acid)	19-32
Poly- unsaturated fatty acids	
C18:2 (cis 9,12), 9,12-Octadecadienoic acid (Linoleic acid)	0.5-3.5
C18:3 (cis 9,12,15) 9,12,15-Octadecatrienoic acid	0.3-1.0".]

[Amendment in force from 27th December, 2021; FBOs to comply with the specified fatty acid composition of ghee after two years of publication of these regulations in the Official Gazette.]

3. Food Additives. -

For products covered under this standard, specific food additives permitted in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The product shall comply with the limits stipulated under the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

The product shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

6. Labelling. -

(a) According to the definitions in item 1 and composition in sub-item (b) of item 2, the name of the food shall be:

(i) Milk fat or Butter Oil
(ii) Anhydrous Milk fat or Anhydrous Butter Oil
(iii) *Ghee*

(b) In addition to the above-mentioned labelling requirements, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis. -

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.9 Standard for Butter

This Standard applies to butter as defined in item 1 of this sub-regulation[3].

1. Definition. -

"Butter" means the fatty product principally in the form of an emulsion of the type water-in-oil derived exclusively from milk or milk products, or both,

[3] This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

Butter may be of following types:

(i) Table butter

(ii) White butter/ Cooking butter

Table butter shall be made from pasteurised cream.

2. Essential composition and quality factors. -

(a) Raw materials. -

Milk and/or milk fat based products obtained from milk.

(b) Permitted ingredients. -

- Sodium chloride and food grade salt *(only in table butter)*
- Starter cultures of harmless lactic acid and flavour producing bacteria
- Potable water

(c) Composition. –

The product shall conform to the compositional specifications provided in the table below:

Parameter	Table butter	White butter/ Cooking butter
Moisture, maximum, %, (m/m)	16.0	--
Milk fat, minimum, %, (m/m)	80.0	76.0
Milk solids-not-fat, maximum, %, (m/m)	2.0	--
Common salt, maximum, %, (m/m)	3.0	--

Note: Where butter is sold or offered for sale without any indication as to whether it is table butter or white butter, the Standards of table butter shall apply.

The extracted fat from butter shall meet the standards for Reichert Meissl value and Butyro-refractometer reading as prescribed for ghee.

3. Food Additives. -

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits for contaminants, toxins and residues stipulated under the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

(a) The product shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products covered under this standard shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

(a) The name of the product shall be "Pasteurized Table butter" or "White butter/ Cooking Butter", as appropriate, in conformance to the composition specified in sub-item (c) of item 2. Additionally, in case of white/cooking butter, the name should be preceded by the term 'Pasteurised' if the product has been prepared from pasteurised cream.

(b) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply to pre-packaged products.

7. Method of Sampling and Analysis. -

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.10 Standard for Milk Powders and Cream Powder

This Standard applies to cream powder and milk powders as defined in item 1 of this sub-regulation. *

1. Description. -

Milk powders and cream powder are milk products which can be obtained by partial removal of water from milk or cream. The fat or protein content, or both of the milk or cream may be adjusted, only to comply with the compositional requirements in sub-item (b) of item 2 of this sub-regulation, by addition or withdrawal of milk constituents in

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

such a way as not to alter the whey protein to casein ratio of the milk or cream being adjusted. Product shall be free from added whey and whey preparations.

2. Essential Composition and Quality Factors. -

(a) Raw materials-

i) Milk and cream

ii) The following milk products are allowed for protein adjustment purposes:

– Milk retentate: Milk retentate is the product obtained by concentrating milk protein by ultrafiltration of milk, partly skimmed milk, or skimmed milk;

(b) Composition. -

The product shall conform to the compositional specifications provided in the table below: −

Parameter	Whole Milk Powder	Partly Skimmed Milk Powder	Skimmed Milk Powder	Cream Powder
Moisture*, maximum, %, (m/m)	5.0	5.0	5.0	5.0
Milk fat, %, (m/m)	Minimum 26.0 and less than 42.0	More than 1.5 and less than 26.0	1.5 (maximum)	42.0 (minimum)
Milk protein** in milk solids-not-fat, minimum, %, (m/m)	34.0	34.0	34.0	34.0
Titrable acidity, maximum (ml 0.1 NaOH for 10 g - solids-not-fat)	18.0	18.0	18.0	--
Insolubility Index, maximum, ml	2.0	2.0	2.0	--
Total ash, maximum, % (m/m), on moisture and fat free basis	9.3	9.3	9.3	--
Scorched particles, maximum	Disc B	Disc B	Disc B	Disc B

* The moisture content does not include water of crystallization of the lactose; the milk solids-not-fat content includes water of crystallization of the lactose.

** Protein content is 6.38 multiplied by the total nitrogen determined.

[62][Note.- Total sodium content in the milk powder shall not be more than 650 mg/ 100 gm SNF. The maximum level does not apply to sodium that could be present due to the use of sodium containing additives in milk powders.]

3. Food Additives. -

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits stipulated under the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

(a) According to the composition in sub-item (b) of item 2, the name of the food shall be:

(i) whole milk powder, or

(ii) partly skimmed milk powder, or

(iii) skimmed milk powder, or

(iv) cream powder, as appropriate:

Provided that the "partly skimmed milk powder" may be designated "semi-skimmed milk powder" if the content of milk fat does not exceed 16% (m/m) and is not less than 14% (m/m).

(b) Wherever the word "milk" appears on the label of a package of skimmed milk powder as the description or part of the description of the contents, it shall be immediately preceded or followed by the word "skimmed or partly skimmed", as the case may be.

(c) There shall not be placed on any package containing the product covered under this

Standard any comment on, explanation of, or reference to either the statement of equivalence, contained in the prescribed declaration or on the word "skimmed" [or "unsuitable for babies"] except instructions as to dilution as follows:

"To make a fluid not below the composition of (here insert type of milk - toned milk or skimmed milk as the case may be) with the contents of this package, add (here insert the number of parts) of water by volume to one part by volume of this product".

(d) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.11 Standard for Dairy Whitener

This Standard applies to Dairy Whitener as defined in item 1 of this sub-regulation. *

1. Description.-

Dairy Whitener is a milk product prepared through an appropriate processing of cow milk, buffalo milk or milk of any other species as defined under this regulation or a mixture thereof, and contains added carbohydrates such as sucrose, dextrose and maltodextrin, singly or in combination. The fat or protein content, or both, of the milk may be adjusted by addition or withdrawal of milk constituents in such a way as not to alter the whey protein to casein ratio of milk.

2. Essential Composition and Quality Factors.-

The product shall be white or light cream in colour, uniform in composition and free from lumps except those that break up readily under slight pressure. The product shall be free from extraneous matters and added colours.

The flavour of the product before or after reconstitution shall be pleasant and sweet. It shall be free from off flavours. It is recommended that the flavour and taste may be judged on the basis of their sensory characteristics.

The product shall conform to the compositional specifications provided in the table below: −

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

Sr. No.	Characteristics	Requirement			
		Skimmed Milk Dairy Whitener	Low Fat Dairy Whitener	Medium Fat Dairy Whitener	High Fat Dairy Whitener
1.	Moisture, maximum, %, (m/m)	4.0	4.0	4.0	4.0
2.	Milk Fat, %, (m/m)	1.5 (maximum)	More than 1.5 and less than 10.0	Minimum10.0 and less than 20.0	20.0 (minimum)
3.	Milk protein** (in solids-not-fat), minimum, %, (m/m)	34.0	34.0	34.0	34.0
4.	Insolubility Index, ml, maximum	1.5	1.5	1.5	1.5
5.	Total ash (on moisture, added sugar and fat free basis), maximum, %, (m/m)	9.3	9.3	9.3	9.3
6.	Acid Insoluble ash, maximum, %, (m/m)	0.1	0.1	0.1	0.1
7.	***Added sugar (as sucrose), maximum, %, (m/m)	18.0	18.0	18.0	18.0
8.	Titratable acidity, maximum, % (as lactic acid)	1.5	1.5	1.5	1.2
9.	Scorched particles, maximum	Disc B	Disc B	Disc B	Disc B

** Protein content is 6.38 multiplied by the total nitrogen determined

*** Added sugar up to a level of 24% shall be permissible up to two years from the date of final notification.

3. Food Additives.-

For products covered under this standard, specific food additives specified in Appendix ‘A’ of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues.-

The products shall comply with the maximum levels for contaminants specified in the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling.-

(a) According to the composition in sub-item (b) of item 2, the name of the food shall be:

(i) Skimmed Milk Dairy Whitener, or

(ii) Low Fat Dairy Whitener, or

(iii) Medium Fat Dairy Whitener, or

(iv) High Fat Dairy Whitener, as appropriate:

(b) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.12 Standard for Whey Powder

This Standard applies to Whey Powders as defined in item 1 of this sub-regulation.*

1. Description. -

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

(a) Whey powders are milk products obtained by drying Whey or Acid Whey.

(b) Whey is the fluid milk product obtained during the manufacture of cheese, casein or similar products by separation from the curd after coagulation of milk or of products obtained from milk, or both. Coagulation is obtained through the action of, principally, suitable enzymes of non-animal origin.

(c) Acid whey is the fluid milk product obtained during the manufacture of cheese, casein, *paneer*, *channa* or similar products by separation from the curd after coagulation of milk and of products obtained from milk. Coagulation is obtained, principally, by acidification and heating.

2. Essential Composition and Quality Factors. -

(a) Raw materials. -

Whey or Acid whey, as appropriate.

(b) Ingredients. -

Seed lactose in the manufacture of pre-crystallized Whey Powder.

(c) Composition. –

The product shall conform to the compositional specifications provided in the table below: –

Parameter	Whey Powder	Acid Whey Powder
Moisture(i), maximum, %, (m/m)	5.0	4.5
Milk fat, maximum, %, (m/m)	2.0	2.0
Milk protein(ii), minimum, %, (m/m)	10.0	7.0
Lactose content(iii), as anhydrous lactose, minimum, %, (m/m)	61.0	61.0
pH (in 10% solution)	more than 5.1(iv) --	5.1(v) (maximum)
Total ash, maximum, %, (m/m) (on dry basis)	9.5	15.0

Note(s):

(i) The water content does not include water of crystallization of the lactose.

(ii) Protein content is 6.38 multiplied by the total nitrogen determined.

(iii) Although the powders may contain both anhydrous lactose and lactose monohydrates, the lactose content is expressed as anhydrous lactose. 100 parts of lactose monohydrate contain 95 parts of anhydrous lactose.

(iv) Or titratable acidity (calculated as lactic acid) <0.35%.

(v) Or titratable acidity (calculated as lactic acid) ≥ 0.35%.

In accordance with the provision of entry (iii) of sub-item(c) of item 3 of sub-regulation 2.1.1 (General Standard for Milk and milk products), whey powders may be modified in composition to meet the desired end-product composition, for instance, neutralization or demineralization. However, compositional modifications beyond the minimum or maximum specified above for milk protein and water are not permitted.

3. Food Additives. -

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits stipulated under the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

(a) According to the composition in sub-item (c) of item 2, the name of the food shall be:

(i) Whey Powder, or
(ii) Acid Whey Powder, as appropriate:

(b) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.13 Standard for Fermented Milk Products

This Standard applies to fermented milks, including, heat-treated fermented milks, concentrated fermented milks and composite milk products based on these products in conformity with the definitions given in item 1 of this sub-regulation.*

1. Description.-

(a) Fermented Milk is a milk product obtained by fermentation of milk, which may have been manufactured using other permitted raw material, by the action of suitable microorganisms and resulting in lowering of pH with or without coagulation (iso-electric precipitation). Fermented milk may be heat treated after fermentation. The raw material used shall be subjected to a heat treatment as defined in the General Standard for Milk and Milk Products.

Certain fermented milks are characterised by specific starter culture(s) used for fermentation as follows:

Dahi (Curd)	Lactic acid bacteria
Yoghurt	Symbiotic cultures of *Streptococcus thermophilus* and *Lactobacillus delbrueckii* sub sp. *bulgaricus*
Alternate Culture Yoghurt	Cultures of *Streptococcus thermophilus* and *Lactobacillus species*
Acidophilus milk	*Lactobacillus acidophilus*.

Other harmless microorganisms than those constituting the specific starter cultures specified above may also be added.

(b) Flavoured fermented milk are composite milk products, as defined in sub-regulation 2.1.1, obtained from fermented milks and which contain a maximum of 50% (m/m) of permitted non-dairy ingredients including flavourings. The non-dairy ingredients can be mixed prior to or after fermentation:

Provided that flavoured *dahi* shall only be sold in pre-packaged form.

(c) Drinks based on fermented milk are composite milk products, as defined in sub-regulation 2.1.1, obtained by mixing fermented milks as described in sub-item (a) of item 1 with potable water with or without the addition of whey, other milk and milk products, other permitted non-dairy ingredients and flavours. Drinks based on fermented milk contain a

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

minimum of 40% (m/m) fermented milk. Other microorganisms than those constituting the specific starter cultures may be added. Drinks based on fermented milk include products such as *lassi, chhaach, buttermilk, etc.*

(d) Concentrated Fermented Milk is fermented milk, the protein of which has been increased prior to or after fermentation.

(i) *Chakka* means the fermented and concentrated milk product obtained by (partial) removal of the whey from plain *dahi* or plain yoghurt or by any other process which leads to a product of same composition and characteristics. It shall have white to pale yellow colour and uniform semi-solid consistency. It shall not be moldy and shall be free from signs of free fat and water. It shall be smooth and not appear dry. The milk from which *dahi* or yoghurt is prepared for manufacturing *chakka* shall be subjected to a heat treatment as defined in the sub-regulations 2.1.1 (General Standard for Milk and Milk Products).

(ii) *Shrikhand* means the semi-soft concentrated composite milk product obtained from *chakka*, or skimmed milk *chakka* to which milk fat and sugar is added or by any other process which leads to a product of same composition and characteristics. It may also contain permitted non-dairy ingredients.

2. Essential Composition and Quality Factors.-

(a) Raw materials.-
- (i) milk;
- (ii) concentrated milk and dried milk;
- (iii) cream, butter, butter oil and anhydrous milk fat;
- (iv) potable water for use in reconstitution or recombination or drinks based on fermented milks.

(b) Permitted ingredients.-
- (i) starter cultures of harmless microorganisms, including those specified in sub-item (a) of item 1;
- (ii) other suitable and harmless microorganisms;
- (iii) salt;
- (iv) sugar *(only in Flavoured Fermented Milks, Drinks based on Fermented Milks, Yoghurt, Dahi and Shrikhand)*;
- (v) nutritive sweeteners other than sugar *(only in Flavoured Fermented Milks, Drinks based on Fermented Milks, Yoghurt and pre-packaged Dahi)*;
- (vi) non-dairy ingredients such as fruits and vegetables and their products thereof such as juices, purees, pulps, preparations and preserves derived therefrom, cereals and cereal products, coconut and coconut products, honey, chocolate, nuts, coffee, spices, condiments, culinary herbs and other harmless natural flavouring foods *(only in Flavoured Fermented Milks, Drinks based on Fermented Milks and Shrikhand)*;
- (vii) milk and milk products (*only in Drinks based on Fermented Milks*);
- (viii) Prebiotics and Probiotics;

(ix) Starch *(only in fermented milks heat treated after fermentation, flavoured fermented milks and drinks based on fermented milks)*

Provided that it is added only in amounts functionally necessary as governed by Good Manufacturing Practice, taking into account any use of the stabilizers or thickeners as specified in Appendix 'A' of these regulations. Starch may be added either before or after adding the non-dairy ingredients.

(c) Composition:

(i) The starter microorganisms shall be viable, active and abundant in the product up to the date of minimum durability. The sum of microorganisms constituting the starter culture defined in sub-item (a) of item 1 shall not be less than 10^7cfu/g. The labelled microorganisms, when specific microorganisms other than those specified in sub-item (a) of item 1are added and a content claim is made on label, shall not be less than 10^6cfu/g. If the product is heat treated after fermentation these requirements for viable microorganisms do not apply;

(ii) Fermented milks shall have a minimum milk protein content of 2.9 % (m/m) and minimum titrable acidity of 0.45% (m/m as lactic acid) unless otherwise specified. In case of Flavoured Fermented Milks and Drinks based on Fermented Milks, these specifications apply to the Fermented Milk Part unless otherwise specified;

(iii) Plain *Dahi* shall have the same minimum percentage of milk fat and milk solids-not-fat as that of the milk, as provided for in the Standard for Milk, from which it is prepared. Where plain *Dahi* is sold or offered for sale without any indication of class of milk, the Standards prescribed for *Dahi* prepared from mixed milk shall apply;

(iv) Yoghurt (including Flavoured Yoghurt) and Flavoured *Dahi* shall conform to the following compositional specifications:-

Parameter	Yoghurt and Flavoured *Dahi*	Partly skimmed Yoghurt And Flavoured Partly Skimmed *Dahi*	Skimmed Yoghurt And Flavoured Skimmed *Dahi*
Milk Fat, % , (m/m)	Not less than 3.0 and not more than 15	More than 0.5 and Less than 3.0	0.5 (maximum)
Milk solids-not-fat, minimum, % , (m/m)	8.5	8.5	8.5

Milk protein*, minimum, % , (m/m)	2.9	2.9	2.9
Titratable acidity, minimum, % (as lactic acid)	0.6	0.6	0.6

* Protein content is 6.38 multiplied by the total nitrogen determined

Note:

- When sold without any indication, the product shall conform to the Standards of 'Yoghurt' or 'Flavoured *Dahi',* as appropriate. The term 'flavoured' covers sweetened, flavoured and fruit variants, labelled in accordance with sub-item (b) of item 6 below. For the use of probiotics in dairy products; the 'Indian Council Medical Research Guidelines for Evaluation of Probiotics in Food shall be followed.

(v) *Chakka* shall conform to the following compositional specifications: −

Parameter		Chakka	Skimmed Milk Chakka	Full Cream Chakka
1	Total solids, minimum, %, (m/m)	30.0	20.0	28.0
2	Milk fat, %, (m/m), on dry basis	33.0 (minimum)	5.0 (maximum)	38.0 (minimum)
3	Milk protein*, minimum, %, (m/m), on dry basis	30.0	60.0	30.0
4	Titratable acidity, maximum, % (as lactic acid)	2.5	2.5	2.5
5	Total Ash, maximum, %, (m/m), on dry basis	3.5	5.0	3.5

* Protein content is 6.38 multiplied by the total nitrogen determined

Note: When sold without any indication, the product shall conform to the standards of *'Chakka'*.

(vi) *Shrikhand* shall conform to the following compositional specifications: −

Parameter	Shrikhand	Full Cream Shrikhand	Fruit Shrikhand
Total solids, minimum, %, (m/m)	58.0	58.0	58.0
Milk fat, minimum, %, (m/m), on dry basis	8.5	10.0	7.0
Milk protein*, minimum, %, m/m, (on dry basis)	9.0	7.0	6.0
Titratable acidity, maximum, % (as lactic acid)	1.4	1.4	1.4
Sugar (sucrose), maximum, %, m/m (on dry basis)	72.5	72.5	72.5
Total Ash, maximum, %, m/m (on dry basis)	0.9	0.9	0.9

* Protein content is 6.38 multiplied by the total nitrogen determined

(d) Essential manufacturing characteristic: Whey removal after fermentation is not permitted in the manufacture of fermented milks, except for concentrated fermented milk.

3. Food Additives. -

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues.-

The products shall comply with Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling.-

(a) Name of the food.-

(i) The name of the products covered by sub-item (a) and (b) of item 1 shall be 'Fermented Milk':

Provided that the name 'Fermented Milk' may be replaced with designations *Dahi,* Curd and Yoghurt if the product complies with the relevant provisions of this Standard.

The designation 'Yoghurt or *Dahi*' may be used in connection with the term "frozen":

Provided that,-

- the product submitted to freezing complies with the requirements in this Standard;
- the specific starter cultures can be reactivated in the specified numbers by thawing; and
- the frozen product is named as such and is sold for direct consumption only.

(ii) Yoghurt or Dahi containing non-dairy ingredients may be designated as 'Sweetened or Flavoured Yoghurt or *Dahi',* as appropriate. Yoghurt or *Dahi* containing fruits may be designated as 'Fruit Yoghurt or D*ahi',* as appropriate.

The name of the products defined in sub-item (c) of item 1 shall be '*Drinks based on Fermented Milk'* or may be designated with other recognized specific names like *lassi, chhaas* etc. When flavoured, the designation shall include the name of the principal flavouring substance(s) or flavour(s) added.

(iii) The name of the products covered by item (i) of sub-item (d) of item 1 shall be 'Chakka'.

(iv) The name of the products covered by item (ii) of sub-item (d) of item 1 shall be 'Shrikhand'.

(v) Products obtained from fermented milk(s) heat treated after fermentation shall be named "Heat Treated _____", the blank being replaced by the term "Fermented Milk" or another permitted designation or name as appropriate.

(vi) The designation of Flavoured Fermented Milks shall include the name of the principal flavouring substance(s) or flavour(s) added.

(vii) Fermented milks to which only nutritive carbohydrate sweeteners have been added, may be labelled as "sweetened _____", the blank being replaced by the term "Fermented Milk" or another permitted designation or name as appropriate.

(b) The type of *dahi,* yoghurt, *chakka* or *shrikhand* shall be always declared on the label or otherwise if the product is not pre-packaged such declaration to be given on the container from which product will be offered to the consumer.

(c) When cultures of *Bifidobacterium bifidum* and *Lactobacillus acidophilus* and other cultures of suitable lactic acid producing harmless bacteria are added, a declaration to this effect shall be made on the label or otherwise if the product is not pre-packaged.

(d) In addition to the labelling requirements mentioned above, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.14 Standard for Ice Cream, *Kulfi*, Chocolate Ice Cream, Softy Ice-Cream, Milk Ice, Milk Lolly and Dried Ice Cream Mix

This Standard applies to Ice Cream and *Kulfi* and their variants, milk ice and milk lolly, and dried ice-cream mix in conformity with the definitions given in item 1 of this sub-regulation.*

1. Description. -

(a) Ice-Cream, *Kulfi*, Chocolate Ice Cream or Softy Ice-Cream means the frozen milk product conforming to the composition specified in entry (i) of sub-item (c) of item 2, obtained by freezing a pasteurized mix prepared from milk or other products derived from milk, or both, with or without addition of nutritive sweeteners and other permitted non-dairy ingredients. The said product may contain incorporated air and shall be frozen hard except in case of softy ice-cream where it can be frozen to a soft consistency.

(b) Milk Ice or Milk Lolly means the product conforming to the composition specified in entry (ii) of sub-item (c) of item 2, obtained by freezing a pasteurized mix prepared from milk or other products derived from milk with or without the addition of nutritive sweeteners and other permitted non-dairy ingredients. The said product shall be frozen hard.

(c) Dried Ice-Cream Mix means the product in a powder form which on addition of prescribed amount of water and freezing shall result in a product similar in characteristics to the respective product described in the sub-item (a) of item 1.

2. Essential Composition and Quality Factors. -

(a) Raw Material. -

Milk and milk products.

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

(b) Permitted ingredients. -

(i) sugar and other nutritive sweeteners (e.g. *jaggery*, dextrose, fructose, liquid glucose, dried liquid glucose, high maltose corn syrup, honey etc.);

(ii) potable water;

(iii) starch, provided it is added only in amounts functionally necessary as governed by Good Manufacturing Practice, taking into account any use of the stabilizers or thickeners as specified in Appendix 'A' of these regulations.;

(iv) other non-dairy ingredients - fruit and fruit products, eggs and egg products, coffee, cocoa, chocolate, confectionary, condiments, spices, ginger and nuts; bakery products such as cake or cookies.

(c) Composition. -

The product shall conform to the compositional specifications provided in the table below: –

(i) Ice cream, *Kulfi*, Chocolate Ice cream and Softy Ice Cream

Parameter	**Ice cream or *Kulfi* or Chocolate ice cream or softy ice cream**	**Medium Fat Ice Cream or *Kulfi* or Chocolate ice cream or softy ice cream**	**Low Fat Ice Cream or *Kulfi* or Chocolate ice cream or softy ice cream**
Total Solids, minimum, %, (m/m)	36.0	30.0	26.0
Weight, minimum, g/l	525.0	475.0	475.0
Milk Fat, %, (m/m)	10.0 (minimum)	More than 2.5 and less than 10.0	2.5 (maximum)
Milk Protein*, minimum, %, (m/m)	3.5	3.5	3.0

* Protein content is 6.38 multiplied by the total nitrogen determined

Note(s):

(i) In case where coating, base or layer of non-dairy ingredients forms a separate part of the product, only the Ice Cream portion shall conform to the respective composition.

(ii) When any type of ice cream, *kulfi*, chocolate ice cream or softy ice cream is offered for sale in contravention of the requirements of sub-item (b) of item 6, the standards prescribed for the type ice cream, *kulfi*, chocolate ice cream or softy ice cream as per this sub-regulation shall apply.

(ii) Milk Ice or Milk Lolly.-

Parameter	Milk ice or Milk lolly
Total Solids, minimum, %, (m/m)	20.0
Milk Fat, maximum, %, (m/m)	2.0
Milk Protein*, minimum, %, (m/m)	3.5

* Protein content is 6.38 multiplied by the total nitrogen determined

Note: In case where base or layer of non-dairy ingredients forms a separate part of the product, only the milk ice or milk lolly portion shall conform to the above composition.

(iii) Dried Ice Cream Mix.-

The said product on addition of water shall give a product conforming to the composition, except the 'weight', as specified in the entry (i) of sub-item (c) of item 2 for the respective product described in sub-item (a) of item 1. The moisture content of the dried product shall not be more than 4.0 % (m/m).

3. Food Additives. -

(a) For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

(b) The food additive use level specified in Appendix 'A' of these regulations shall apply to the product after reconstitution in respect of dried Ice Cream Mix.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits stipulated in the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling.-

(a) Name of the Food.-

(i) The name of the product covered by sub-item (a) of item 1 shall be 'Ice Cream', '*Kulfi'*, 'Chocolate Ice Cream' or 'Softy Ice Cream'.

(ii) The name of the product covered by sub- item (b) of item 1 shall be 'Milk Ice' or 'Milk Lolly'.

(iii) The name of the product covered by sub- item (c) of item 1 shall be 'Dried Ice Cream Mix'.

(b) The type, as per item (i) of sub- item (c) of item 2, of ice cream, *kulfi*, chocolate ice cream or softy ice cream shall always be indicated on the label of the product. For softy ice cream offered for sale directly from the freezer without prepackaging, the type of product shall be displayed in a manner and at a place that is clearly visible to the consumer.

(c) Every package of ice cream, *kulfi*, chocolate ice cream and softy ice cream containing starch shall have a declaration on its label as specified in sub- regulation 2.7.1 (2) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(d) In addition to the above mentioned labelling requirements, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.15 Standard for Frozen Desserts or Confections with Added Vegetable Oil/ Fat or Vegetable Protein, or both

This Standard applies to Frozen Desserts or Confections in conformity with the definitions in item 1 of this sub-regulation.*

1. Definition.-

(a) Frozen Dessert or Frozen Confection means the product obtained by freezing a pasteurised mix prepared with edible vegetable oils or fats, having a melting point of not more than 37^0 C or vegetable protein products, or both. It may also contain milk fat and other

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

milk solids with the addition of nutritive sweeteners and other permitted non-dairy ingredients. The said product may contain incorporated air and may be frozen hard or frozen to a soft consistency.

(b) Dried Frozen Dessert Mix or Dried Frozen Confection Mix means the product in a powder form which on addition of prescribed amount of water and freezing shall give a product similar in characteristics to frozen dessert as described in sub-item (a).

2. Essential Composition and Quality Factors.-

(a) Raw Material.-

(i) Milk and/or milk products;

(ii) Vegetable oils or fats;

(iii)Vegetable protein products.

(b) Permitted ingredients.-

(i) sugar and other nutritive sweeteners (e.g. jaggery, dextrose, fructose, liquid glucose, dried liquid glucose, high maltose corn syrup, honey etc.);

(ii) potable water;

(iii) starch, provided it is added only in amounts functionally necessary as governed by Good Manufacturing Practice, taking into account any use of the stabilizers or thickeners as specified in Appendix 'A' of these regulations.;

(iv) other non-dairy ingredients - fruit and fruit products, eggs and egg products, coffee, cocoa, chocolate, confectionary, condiments, spices, ginger and nuts; bakery products such as cake or cookies.

(c) Composition.-

The product shall conform to the compositional specifications provided in the table below: −

(i) Frozen Dessert or Frozen Confection

Parameter	Frozen Dessert or Frozen Confection	Medium fat Frozen Dessert or Frozen Confection	Low fat Frozen Dessert or Frozen Confection
Total Solids, minimum, %, (m/m)	36.0	30.0	26.0
Weight, minimum, (g/l)	525.0	475.0	475.0
Total Fat, %, (m/m)	10 (minimum)	More than 2.5 and less than 10.0	2.5

			(maximum)
Protein*, minimum, % (m/m)	3.5	3.5	3.0

* Protein content is 6.25 multiplied by the total nitrogen determined

Note(s):

(1) In case where coating, base or layer of non-dairy ingredients forms a separate part of the product, only the Frozen Dessert or Frozen Confection portion shall conform to the respective composition.

(2) When any type of Frozen Dessert or Frozen Confection is offered for sale in contravention of the requirements of sub-item (b) of item 6, the Standards prescribed for these types of Frozen Desserts or Frozen Confections as per this item shall apply.

(ii) Dried Frozen Dessert Mix or Dried Frozen Confection Mix

The product on addition of water shall give a product conforming to the composition, except the 'weight', as specified in the entry (i) of sub- item (c) of item 2 for the respective product described in the sub- item (a) of item 1. The moisture content of the dried product shall not be more than 4.0 % (m/m).

3. Food Additives. –

(a) For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

(b) The food additive use level specified in Appendix 'A' of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 shall apply to the product after reconstitution in respect of Dried Frozen Dessert Mix or Dried Frozen Confection Mix.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits stipulated in the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling .-

(a) Name of the food.-

(i) The name of the product covered by sub-item (a) of item 1 shall be 'Frozen Dessert or Frozen Confection'.

(ii) The name of the product covered by sub-item (b) of item 1 shall be 'Dried Frozen Dessert or Dried Frozen Confection'.

(b) The type, as per entry (i) of sub-item (c) of item 2, of Frozen Dessert or Frozen Confection shall be indicated on the label of the product. For soft consistency products offered for sale directly from the freezer without any pre-packaging, the type of product shall be displayed in a manner and at a place that is clearly visible to the consumer.

(c) Every package of Frozen Desert or Frozen Confection shall bear the following label, namely: −

"Contains ……. % Milk Fat* Edible Vegetable Oil* and Vegetable Fat* and Vegetable Protein Product"

**strike out whatever is not applicable*

[Clause 6(c) of 2.1.15 shall came in to force after final decision of fssai on nomenclature of Frozen dessert].

(d) In addition to the above-mentioned labelling requirements, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.16 Standard for *Chhana* and *Paneer*

This Standard applies to *Chhana* and *Paneer* as defined in the item 1 of this sub- regulation. *

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.
** As defined in item 1 of the sub-regulation 2.1.2 (Standard for Milk).

1. Definition. -

Chhana or *Paneer* means the product obtained from any variant of milk[**], with or without added milk solids, by precipitation with permitted acidulants and heating.

2. Essential Composition and Quality Factors.-

(a) Raw materials.-

(i) Milk

(ii) Milk solids

(b) Permitted ingredients.-

(i) Acidulants such as lactic acid, citric acid, malic acid, vinegar, glucono delta lactone, sour whey;

(ii) spices and condiments (for flavoured *paneer* only);

(iii) salt (for flavoured *paneer* only).

(c) Composition. –

The product shall conform to the compositional specifications provided in the table below: −

[62][Parameter	*Chhana or Paneer*	*Medium fat Chhana or Paneer*	*Low fat Chhana or Paneer*
Moisture, maximum, %, (m/m)	65.0 (for *Chhana)* 60.0 (for *Panner)*	65.0 (for *Chhana)* 60.0 (for *Panner)*	70.0 (for *Chhana)* 70.0 (for *Panner)*
Milk fat, %, (m/m), dry matter basis	50.0 (minimum)	More than 20.0 and less than 50.0	20.0(maximum)]

3. Food Additives. -

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits stipulated in the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

[62][(a) The name of the product shall be '*Chhana*', '*Paneer*', 'Low Fat *Chhana*' or Low Fat *Paneer*', 'Medium Fat *Chhana*' or 'Medium Fat *Paneer*' depending upon the composition as per the sub-item (c) of item 2.

(b) 'Low Fat *Chhana*'/'Medium Fat *Chhana*' and 'Low Fat *Paneer*'/'Medium Fat *Paneer*' shall be sold in sealed package only and shall bear the following label declarations depending upon the respective product composition:

"LOW FAT *PANEER* or LOW FAT *CHHANA*"

Or

"MEDIUM FAT *PANEER* or MEDIUM FAT *CHHANA*"';

(c) Every package of Medium Fat *Channa* and Medium Fat *Paneer* shall bear the following label, namely: −

"Contains ……. % Milk Fat"]

(d) In addition to the above-mentioned labelling requirements, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.17 Standard for Cheese and Cheese Products

This Standard applies to Cheese, Processed Cheese and Processed Cheese Spreads as defined in the item 1 of this sub-regulation.*

1. Description. -

Cheese is the ripened or unripened soft, semi-hard, hard, or extra-hard product, which may be coated with food grade waxes or polyfilm, and in which the whey protein/ casein ratio does not exceed that of milk. Cheese is obtained by:

(i) coagulating wholly or partly the protein of milk, skimmed milk, partly skimmed milk, cream, whey cream or buttermilk, or any combination of these materials, through the action of suitable enzymes of non-animal origin or other suitable coagulating agents, with or without use of harmless lactic acid bacteria and flavour producing bacteria, and by partially draining the whey resulting from the coagulation, while respecting the principle that cheese-making results in a concentration of milk protein (in particular, the casein portion), and that consequently the protein content of the cheese will be distinctly higher than the protein level of the blend of the above milk materials from which cheese was made;

(ii) processing techniques involving coagulation of the protein of milk or products obtained from milk, or both, which give an end-product with similar physical, chemical and organoleptic characteristics as the product specified in entry (i) above.

All cheese shall be made from milk which is subject to heat treatment at least equivalent to that of pasteurization.

(A) 'Ripened Cheese' means cheese which is not ready for consumption shortly after manufacture but which must be held for some time at such temperature and under such other conditions as will result in necessary biochemical and physical changes characterizing the cheese in question.

(B) 'Mould Ripened Cheese' means ripened cheese in which the ripening has been accomplished primarily by the development of characteristic mould growth through the interior and/ or on the surface of the cheese.

(C) 'Unripened Cheese including fresh cheese' means cheese which is ready for consumption shortly after manufacture.

(a) "Individual or Named Variety Cheese" is a cheese, as defined in item 1 of this sub-regulation, that is designated with its well-established unique name as provided below.

(aa) 'Cheddar Cheese' means ripened hard cheese obtained by coagulating heated or pasteurised milk with cultures of harmless lactic acid producing bacteria, suitable

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

enzymes of non-animal origin or other suitable coagulating enzymes. It shall be in the form of hard pressed block and it may have a coating of food grade waxes or wrapping of cloth or polyfilm. It shall have firm, smooth and waxy texture with a pale straw to orange colour without any gas holes.

(ab) 'Danbo Cheese' means ripened semi hard cheese obtained by coagulating heated or pasteurised milk with cultures of harmless lactic acid producing bacteria, suitable enzymes of non-animal origin or other suitable coagulating enzymes. It shall be smooth in appearance with firm texture and uniform yellow colour and may be coated with food grade waxes or wrapping of cloth or polyfilm.

(ac) 'Edam Cheese' means the ripened semi hard cheese obtained by coagulating heated or pasteurised milk with cultures of harmless lactic acid producing bacteria, suitable enzymes of non-animal origin or other suitable coagulating enzymes. It shall have a firm texture suitable for cutting with a yellowish colour and may have a hard rind which may be coated with food grade waxes, wrapping of cloth, polyfilm or vegetable oil.

(ad) 'Gouda Cheese' means ripened semi hard cheese obtained by coagulating milk with cultures of harmless lactic acid producing bacteria, suitable enzymes of non-animal origin or other suitable coagulating enzymes. It shall have firm texture suitable for cutting, straw to yellowish colour which may have a hard rind coated with food grade waxes, wrapping of cloth, or vegetable oil.

(ae) 'Havarti Cheese' means ripened semi hard cheese obtained by coagulating milk with cultures of harmless lactic acid producing bacteria, suitable enzymes of non-animal origin or other suitable coagulating enzymes. It shall have firm texture suitable for cutting, a light yellow colour and may have a semi soft slightly greasy rind.

(af) 'Tilsiter means' ripened semi hard cheese obtained by coagulating milk with cultures of harmless lactic acid producing bacteria and cultures of *Bacterium linens*, suitable enzymes of non-animal origin or other suitable coagulating enzymes. It shall have firm texture suitable for cutting, with an ivory to yellow colour with a firm rind which may show red and yellow smear producing bacteria or coated with food grade waxes or wrapping of cloth or polyfilm after removal of the smear.

(ag) 'Cottage Cheese' and Creamed Cottage Cheese means soft unripened cheese obtained by coagulation of pasteurised skimmed milk with cultures of harmless lactic acid bacteria with or without the addition of suitable enzymes of non-animal origin or other suitable coagulating enzymes. Creamed Cottage Cheese is cottage cheese to which a pasteurised creaming mixture of cream, skimmed milk, condensed milk, non-fat dry milk, dry milk protein, Sodium or Potassium or Calcium or Ammonium caseinate is added. It shall have a soft texture with a natural white colour. It may contain spices, condiments, seasonings and fruits pulp.

(ah) 'Cream Cheese' (Rahmfrischkase) means soft, unripened cheese obtained by coagulation of pasteurised milk and pasteurised cream with cultures of harmless

lactic acid producing bacteria with or without the addition of suitable enzymes of non-animal origin or other suitable coagulating enzymes. It shall have a soft smooth texture with a white to light cream colour. It may contain spices, condiments, seasonings and fruit pulp.

(ai) 'Coulommiers Cheese' means soft unripened cheese obtained by coagulation of milk with cultures of harmless lactic acid producing bacteria and suitable enzymes of non-animal origin or other suitable coagulating enzymes and moulds characteristic of the variety. It shall have soft texture and white to cream yellow colour and may show presence of white mould including orange or red spots on the surface.

(aj) 'Camembert Cheese' means ripened soft cheese obtained by coagulating milk of with cultures of harmless lactic acid producing bacteria and cultures of *Penicillium caseicolum* and *Bacterium linens,* suitable enzymes of non-animal origin or other suitable coagulating enzymes. It may be in the form of flat cylindrical shaped cheese covered with white mould (*Penicillum caseicolum*) with occasional orange coloured spots (*Bacterium linens*).

(ak) 'Brie Cheese' means soft ripened cheese obtained by coagulating milk with cultures of harmless lactic acid producing bacteria and cultures of *Penicillium caseicolum* and *Bacterium linens,* suitable enzymes of non-animal origin and other suitable coagulating enzymes. It shall be white to creamy yellow in colour with a smooth texture showing presence of white mould (*Penicillium caseicolum*) with occasional orange coloured spots (*Bacterium linens*) on the rind.

(al) 'Saint Paulin' means ripened semi hard cheese obtained by coagulating milk with suitable enzymes of non-animal origin, cultures of harmless lactic acid producing bacteria or other suitable coagulating enzymes. It shall be white to yellow in colour with a firm and flexible texture and a hard rind which may be coated with food grade waxes or polyfilm.

(am) 'Samsoe' means hard ripened cheese obtained by coagulating milk with suitable enzymes of non-animal origin and cultures of harmless lactic acid producing bacteria or suitable coagulating enzymes. It shall be yellow in colour with a firm texture suitable for cutting and may have a rind with or without food grade waxes or polyfilm coating.

(an) 'Emmental' or 'Emmentaler' means hard ripened cheese with round holes obtained by coagulating milk with suitable enzymes of non-animal origin, cultures of harmless lactic acid producing bacteria or other suitable coagulating enzymes. It shall have a light Yellow colour and a firm texture suitable for cutting and may have a hard rind.

(ao) 'Provolone' means pasta filata cheese obtained by coagulating milk with cultures of harmless lactic acid producing bacteria, suitable enzymes of non-animal origin or other suitable coagulating enzymes. It may be smoked. It shall be white to yellow

straw in colour with a fibrous or smooth body and rind which may be covered with vegetable fat or oil, food grade waxes or polyfilm.

(ap) 'Extra Hard Grating Cheese' means ripened cheese obtained by coagulating milk with cultures of harmless lactic acid producing bacteria, non-animal rennet, or other suitable coagulating enzymes. It may have slightly brittle texture and an extra hard rind which may be coated with vegetable oil, food grade waxes or polyfilm.

[68][(aq) 'Mozzarella cheese' means unripened cheese obtained by coagulating milk with cultures of harmless lactic acid producing bacteria, suitable enzymes of non-animal origin or by direct acidification. It is a smooth elastic cheese with a long stranded parallel-orientated fibrous protein structure without evidence of curd granules. The cheese is rindless and may be formed into various shapes.

(i) Mozzarella with a high moisture content is a soft cheese with overlying layers that may form pockets containing liquid of milky appearance. The cheese has a near white colour.

(ii) Mozzarella with low moisture content is a firm or semi-hard homogeneous cheese without holes and is suitable for shredding. Mozzarella is made by 'pasta filata' processing, which consists of heating curd of a suitable pH value kneading and stretching until the curd is smooth and free from lumps. Still warm, the curd is cut and moulded, then firmed by cooling.]

(b) "Cheese Products" are the products prepared from cheese(s) with other milk products and may contain permitted non-dairy ingredients.

(ba) 'Processed Cheese' means the product obtained by grinding, mixing, melting and emulsifying one or more varieties of cheeses with the aid of heat and emulsifying agents and may contain cream, butter, butter oil and other milk products. It may also contain non-dairy ingredients not exceeding one sixth of the weight of the total solids of the final product on dry matter basis.

(bb) 'Processed Cheese' Spread means the product obtained by grinding, mixing, melting and emulsifying one or more varieties of cheese with emulsifying agents with the aid of heat and may contain cream, butter oil and other dairy products. It may also contain natural carbohydrate sweetening agents and other non-dairy ingredients not exceeding one sixth of the weight of total solids of the final product on dry weight basis.

[62][(c) Whey Cheeses are solid, semi-solid, or soft products which are principally obtained through either of the following processes:

(1) the concentration of whey and the moulding of the concentrated product;

(2) the coagulation of whey by heat with or without the addition of acid.

In each case, the whey may be pre-concentrated prior to the further concentration of whey or coagulation of the whey proteins. The process may also include the addition of milk, cream, or other raw materials of milk origin before or after concentration or coagulation. The ratio of whey protein to casein in the product obtained through the coagulation of whey shall be distinctly higher than that of milk.

The product obtained through the coagulation of whey may either be ripened or unripened.

(d) "Cheeses in Brine" are semi-hard to soft ripened cheeses. The body has a white to yellowish colour and a compact texture suitable for slicing, with none to few mechanical openings. The cheeses have no actual rind and have been ripened and preserved in brine until delivered to, or prepacked for, the consumer. Certain individual cheeses in brine contain specific herbs and spices as part of their identity.]

2. Essential Composition and Quality Factors.-

(a) Raw materials. -

Milk and products obtained from milk.

(b) Permitted ingredients. -

- Starter cultures of harmless lactic acid, and flavour producing bacteria and cultures of other harmless microorganisms;
- Safe and suitable enzymes (non-animal origin);
- Sodium chloride;
- Potable water;
- Non-dairy ingredients: Vinegar or acetic acid, spices, condiments and other vegetable seasoning and foods, other than sugars, properly cooked or prepared for flavouring and characterization of the product *(In Cheese Products only;*
- Natural carbohydrate sweetening agents: Sucrose, dextrose, corn syrup, corn syrup solids, honey, maltose, malt syrup and hydrolysed lactose *(In Processed Cheese Spreads only).*

(c) Composition. –

The product shall conform to the compositional specifications provided in the table below: −

Product		Moisture, Maximum, % (m/m)	Milk fat, Minimum, % (dry basis)	Lactose, Maximum, % (m/m)
i.	Cheese			

Product		Moisture, Maximum, % (m/m)	Milk fat, Minimum, % (dry basis)	Lactose, Maximum, % (m/m)
a.	Hard- Pressed Cheese	39.0	48.0	--
b.	Semi Hard –Cheese	45.0	40.0	--
c.	Semi-Soft Cheese	52.0	45.0	--
d.	Soft Cheese	80.0	20.0	--
e.	Extra Hard Cheese	36.0	32.0	--
f.	Mozzarella Cheese	60.0	35.0	--
g.	Pizza Cheese	54.0	35.0	--
ii.	Extra Hard Grating Cheese	36.0	32.0	--
iii.	Named variety cheeses			
a.	Cheddar	39.0	48.0	--
b.	Danbo	39.0	45.0	--
c.	Edam	46.0	40.0	--
d.	Gouda	43.0	48.0	--
e.	Havarti			
	− Havarti	48.0	45.0	--
	− 30% Havarti	53.0	30.0	--
	− 60% Havarti	60.0	60.0	--
f.	Tilsiter			
	− Tilsiter	47.0	45.0	--
	− 30% Tilsiter	53.0	30.0	--
	− 60% Tilsiter	39.0	60.0	--
g.	Cottage Cheese and Creamed Cottage Cheese	80.0	*	--

Product		Moisture, Maximum, % (m/m)	Milk fat, Minimum, % (dry basis)	Lactose, Maximum, % (m/m)
h.	Cream cheese	55.0	70.0	--
i.	Coulommiers	56.0	46.0	
j.	Camembert			
	− 30% Camembert	62.0	30.0	--
	− 40% Camembert	59.0	40.0	--
	− 45% Camembert	57.0	45.0	--
	− 55% Camembert	52.0	55.0	--
k.	Brie	56.0	40.0	--
l.	Saint Paulin	56.0	40.0	--
m.	Samsoe			
	− Samsoe	44.0	45.0	--
	− 30% Samsoe	50.0	30.0	--
n.	Emmental	40.0	45.0	--
o.	Provolone			
	− Smoked	45.0	45.0	--
	− Unsmoked	47.0	45.0	--
iv.	Cheese products			
a.	Processed Cheese	47.0 (50% for chiplets, packed sliced processed cheese), when sold in a package other than tin	40.0	5.0
b.	Processed Cheese Spread	60.0	40.0	5.0
[62][v)	Whey cheeses			

Product		Moisture, Maximum, % (m/m)	Milk fat, Minimum, % (dry basis)	Lactose, Maximum, % (m/m)
a.	Creamed whey cheese	-	33	-
b.	Whey cheese	-	**	-
c.	Skimmed whey cheese	-	***	-
vi)	Cheeses in brine			
a.	Soft cheese in brine	-	40	-
b.	Semi-hard cheese in brine	-	40	-]

* Milk fat, Minimum 4% (m/m) for creamed cottage cheese.

[62][** Milk fat in whey cheese shall be minimum 10% and less than 33% on dry basis.

*** Milk fat in skimmed whey cheese shall be less than 10% on dry basis.]

3. Food Additives and Processing Aids.-

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the limits stipulated under the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the guidelines specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling.-

[62][(a) The name of the food product shall be ‘cheese’, ‘whey cheese’ or ‘cheese in brine’, as applicable. However, the word ‘cheese’, ‘whey cheese’ or ‘cheese in brine’ may be omitted in the designation of an individual cheese variety as per sub-item (a) of item 1.]

(b) Every package of Cheese (hard), surface treated with Natamycin, shall bear the following label, namely,—

SURFACE TREATED WITH NATAMYCIN

(c) Every package of Cheese(s), if coated or packed in food grade waxes polyfilm or wrapping of cloth, shall bear the following label, namely,—

REMOVE THE OUTER PACKING BEFORE CONSUMPTION

(d) In addition to the above-mentioned labelling requirements, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Method of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.18 Standard for Edible Casein Products

This Standard applies to Edible Casein products as defined in item 1 of this sub- regulation.

1. Description.-

(a) Edible Casein products mean the products obtained by separating, washing and drying the coagulum of skimmed milk or of other products obtained from milk;

(b) Edible Acid Casein means the product obtained by separating, washing and drying the acid precipitated coagulum of skimmed milk or of other products obtained from milk;

(c) Edible Rennet Casein means the product obtained after washing and drying the coagulum remaining after separating the whey from the skimmed milk or of other products obtained from milk, or both, which has been coagulated by non-animal rennet or by other coagulating enzymes;

(d) Edible Caseinate means the dry product obtained by reaction of edible casein or casein curd coagulum with food grade neutralising agents followed by drying.

2. Essential Composition and Quality Factors.-

(a) Raw Material.-

Skimmed milk and other suitable products obtained from milk.

(b) Ingredients.-

- edible acids;
- starter cultures of harmless lactic acid producing bacteria;
- non-animal rennet or other safe and suitable coagulating enzymes;
- potable water;
- neutralizing agents.

(c) Composition.-

The product shall conform to the compositional specifications provided in the table below: –

Parameter	Edible Acid Casein	Edible Rennet Casein	Edible Caseinate
Moisture[(i)], maximum, % (m/m)	12.0	12.0	8.0
Milk fat, maximum , %, (m/m)	2.0	2.0	2.0
Milk protein[(ii)], minimum , %, (m/m), dry matter basis	90.0	84.0	88.0
Casein in protein, minimum, %, (m/m)	95.0	95.0	95.0
Lactose[(iii)], maximum, %, (m/m)	1.0	1.0	1.0
Total ash including P_2O_5, %, (m/m)	2.5 (maximum)	7.5 (minimum)	--
Free acid, maximum, ml of 0.1 N sodium hydroxide per g	0.27	--	--
pH (in 10% solution), maximum	--	--	8.0

Note(s):

(i) The water content does not include water of crystallization of the lactose.

(ii) Protein content is 6.38 multiplied by the total nitrogen determined.

(iii) Although the powders may contain both anhydrous lactose and lactose monohydrates, the lactose content is expressed as anhydrous lactose. 100 parts of lactose monohydrate contain 95 parts of anhydrous lactose.

3. Food Additives.-

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues. -

The products shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene. -

(a) The products shall be prepared and handled in accordance with the requirements specified in Schedule 4, as applicable, of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines as specified from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling. -

(a) According to the composition in sub-item (c) of item 2, the name of the product shall be Edible Acid Casein or Edible Rennet Casein or Edible Caseinate. Edible Caseinate shall also be qualified by the name of the cation in the neutralizing agent used.

(b) In addition to the above-mentioned labelling requirements, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to pre-packaged product.

7. Methods of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.

2.1.19 Foods for infant nutrition

Infant Milk Substitutes

1. Infant Milk Food means the product prepared by spray drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids; carbohydrates, such as sucrose, dextrose and dextrins/maltodextrin, maltose and lactose; salts like phosphates and citrates; vitamins A, D, E, B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of Mineral Salts and Vitamin Compounds may be used from:-

1. Calcium (Ca) - Calcium carbonate, Calcium chloride, Calcium citrate, Calcium phosphate monobasic, Calcium phosphate dibasic, Calcium phosphate tribasic;

2. Phosphorous (P) - Calcium phosphate monobasic, Calcium phosphate dibasic, Calcium phosphate tribasic, Magnesium phosphate dibasic, Potassium phosphate dibasic;

3. Chloride (Cl) - Calcium chloride, Choline chloride, Magnesium chloride, Manganese chloride, Sodium chloride, Sodium chloride iodized;

4. Iron (Fe) - Ferrous citrate, Ferrous lactate, Ferrous sulphate, Ferric pyrophosphate;

5. Magnesium (Mg) - Magnesium chloride, Magnesium oxide, Magnesium phosphate dibasic;

6. Sodium (Na) - Sodium bicarbonate, Sodium chloride, Sodium chloride iodized, Sodium citrate, Sodium phosphate monobasic;

7. Potassium (K) - Potassium phosphate dibasic;

8. Copper (Cu) - Cupric citrate, Cupric sulphate;

9. Iodine (I) - Potassium iodide, Sodium iodide;

10. Zinc (Zn) - Zinc sulphate;

11. Manganese (Mn) - Manganese chloride, Manganese sulphate;

12. Vitamin A - Retinyl acetate, Retinyl palmitate, Retinyl propionate;

13. Provitamin A - Beta-carotene;

14. Vitamin D - Vitamin D_2 - Ergocalciferol, Vitamin D_3 - Cholecalciferol, Cholecalciferol-cholesterol;

15. Vitamin E - d-alpha-tocopherol, dl-alpha-tocopherol, d-alpha-tocopheryl acetate, dl-alpha-tocopheryl acetate, d-alpha-tocopheryl succinate, dl-alpha-tocopheryl succinate;
16. Thiamine (Vitamin B_1) - Thiamine chloride hydrochloride, Thiamine mononitrate;

17. Riboflavin (Vitamin B_2) - Riboflavin, Riboflavin 5' -phosphate sodium;

18. Niacin - Nicotinamide, Nicotinic acid;

19. Vitamin B_6 - Pyridoxine hydrochloride;

20. Biotin (Vitamin H) - d-biotin;

21. Folacin - Folic acid;

22. Pantothenic acid - Calcium pantothenate, Panthenol;

23. Vitamin B_{12} - Cyanocobalamin, Hydroxycobalamin;

24. Vitamin K - Phytylmenaquinone;

25. Vitamin C - Ascorbic acid, Sodium ascorbate, Calcium ascorbate, Ascorbyl-6-palmitate;

26. Choline - Choline bitartrate, Choline chloride;

27. Inositol;

28. Selenium - Sodium selenite.

The product shall be free of lumps and shall be uniform in appearance. It shall be free from starch and added antioxidants. It shall also be free from dirt, extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall not contain food additives.

It shall conform to the following requirements, namely: -

1.	Moisture, per cent. by weight (not more than)	4.5
2.	Total milk protein, per cent. by weight (not less than)	12.0
3.	Milk fat, per cent. by weight (not less than)	18.0
4.	Total ash, per cent. by weight (not more than)	8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent. by weight (not more than)	0.1
6.	Solubility:	
	Solubility Index (ml), maximum	2.0
	Solubility, per cent. by weight (not less than)	98.5
7.	Vitamin A (as retinol), µg per 100 g (not less than)	350
8.	Added Vitamin D (expressed as Cholecalciferol or Ergocalciferol) µg, per 100g (not less than)	4.5
9.	Vitamin C, mg per 100 g (not less than)	35
10.	Thiamine, µg per 100 g (not less than)	185
11.	Riboflavin, µg per 100 g (not less than)	275
12.	Niacin, µg per 100 g (not less than)	1160
13.	Pyridoxine, µg per 100 g (not less than)	160
14.	Folic acid, µg per 100 g (not less than)	20
15.	Pantothenic acid, mg per 100 g (not less than)	1.4
16	Vitamin B_{12}, µg per 100 g (not less than)	0.7
17	Choline, mg per 100 g (not less than)	32
18	Vitamin K, µg per 100 g (not less than)	18

19	Biotin, µg per 100 g (not less than)	7.0
20	Sodium, mg per 100 g (not less than)	90
21	Potassium, mg per 100 g (not less than)	370
22	Chloride, mg per 100 g (not less than)	250
23	Calcium, mg per 100 g (not less than)	230
24	Phosphorous, mg per 100 g (not less than)	115
25	Magnesium, mg per 100 g (not less than)	22
26	Iron, mg per 100 g (not less than)	5.0
27	Iodine, µg per 100 g (not less than)	20
28	Copper, µg per 100 g (not less than)	280
29	Zinc, mg per 100 g (not less than) and not more than (mg)	2.5 5.0
30	Manganese, µg per 100g (not less than)	20
31	Selenium, µg per 100 g (not less than)	14
32	Bacterial count, per g. (not more than)	10,000
33	Coliform count absent in	0.1 g
34	Yeast and mould count absent in	0.1 g
35	Salmonella and Shigella absent in	25 g
36	E. coli absent in	0.1 g
37	Staphylococcus aureas absent in	0.1 g

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallised film or in such a way to protect from deterioration.

It may be packed in nitrogen or a mixture of nitrogen and carbon dioxide.

2. Infant formula means the product prepared by spray drying of the milk of cow or buffalo or mixture thereof. The milk may be modified by partial removal/substitution of milk fat with vegetable oils rich in polyunsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins/ maltodextrin, maltose and lactose; salts such as phosphates and citrates; vitamins A, D, E, B and C group and other vitamins; minerals such as iron, copper, zinc and iodine and others. Vegetables oils rich in polyunsaturated fatty acids shall be added to partially substitute milk fat to an extent that the product shall contain a minimum of 12 per cent. by weight of milk fat and a minimum of linoleate content of 1.398 g per 100 g. of the product.

It may contain algal and fungal oil as sources of Docosahexaenoic Acid (DHA) and Arachidonic Acid (ARA) from Crypthecodinium cohnii, Morterella alpine, Schizochytrium sp., and Ulkenia sp. At the level of maximum 0.5 per cent. DHA of total fatty acids and ratio of ARA:DHA

as 1:1 minimum:

Provided that DHA content shall not be less than 0.2 per cent. of total fatty acids, if a claim related to the addition of DHA is made.

The products shall also contain a minimum of 0.70 I.U. of vitamin E per 100 kcal. It may contain in addition to the vitamins and minerals listed, other nutrients may be added when required in order to provide nutrients ordinarily found in human milk such as, -

1.	Carotenes	Not less than 0.25 mg/L
2.	Fluorine	Not less than 0.107 mg/L
3.	Amino acids	Not less than 9 mg/L (only L forms of amino acids should be used)
4.	Non-protein nitrogen	Not less than 173 mg/L
5.	Nucleotides	Not less than 11.7 mg/L
6.	Carnitine	Not less than 11.27 µg/L
7.	Lactalbumin	Not less than 1.4 g/L
8.	Lactoferrin	Not less than 0.27 g/L
9.	Lysozyme	Not less than 0.8 g/L
10.	Fucose	Not less than 1.3 g/L
11.	Glucosamine	Not less than 0.7 g/L
12.	Inositol	Not less than 0.39 g/L
13.	Citric acid	Not less than 0.35 g/L
14.	Cholesterol	Not less than 88 mg/L
15.	Lipid Phosphorus	Not less than 7 mg/L
16.	Prostaglandins	Not less than PGE 150 mg/L Not less than PGF 400 mg/L

When any of these nutrients is added, the amount of these added nutrients shall be declared on the label, which should be not less than mentioned. It may contain medium chain triglycerides, taurine, molybdenum and chromium.

The source of Mineral Salts and Vitamin Compounds may be used from:-

1. Calcium (Ca) - Calcium carbonate, Calcium chloride, Calcium citrate, Calcium phosphate monobasic, Calcium phosphate dibasic, Calcium phosphate tribasic;

2. Phosphorous (P) - Calcium phosphate monobasic, Calcium phosphate dibasic, Calcium phosphate tribasic, Magnesium phosphate dibasic, Potassium phosphate dibasic;

3. Chloride (Cl) - Calcium chloride, Choline chloride, Magnesium chloride, Manganese chloride, Sodium chloride, Sodium chloride iodized;

4. Iron (Fe) - Ferrous citrate, Ferrous lactate, Ferrous sulphate, Ferric pyrophosphate;

5. Magnesium (Mg) - Magnesium chloride, Magnesium oxide, Magnesium phosphate dibasic;

6. Sodium (Na) - Sodium bicarbonate, Sodium chloride, Sodium chloride iodized, Sodium citrate, Sodium phosphate monobasic;

7. Potassium (K) - Potassium phosphate dibasic;

8. Copper (Cu) - Cupric citrate, Cupric sulphate;

9. Iodine (I) - Potassium iodide, Sodium iodide;

10. Zinc (Zn) - Zinc sulphate;

11. Source of Manganese (Mn) - Manganese chloride, Manganese sulphate.

Vitamins

1. Vitamin A - Retinyl acetate, Retinyl palmitate, Retinyl propionate;

2. Provitamin A - Beta-carotene;

3. Vitamin D - Vitamin D_2 - Ergocalciferol, Vitamin D_3 - Cholecalciferol, Cholecalciferol-cholesterol;

4. Vitamin E - d-alpha-tocopherol, dl-alpha-tocopherol, d-alpha-tocopheryl acetate, dl-alpha-tocopheryl acetate, d-alpha-tocopheryl succinate, dl-alpha-tocopheryl succinate;

5. Thiamine (Vitamin B_1) - Thiamine chloride hydrochloride, Thiamin mononitrate;

6. Riboflavin (Vitamin B_2) - Riboflavin, Riboflavin 5' -phosphate sodium;

7. Niacin - Nicotinamide, Nicotinic acid;

8. Vitamin B_6 - Pyridoxine hydrochloride;

9. Biotin (Vitamin H) - d-biotin;

10. Folacin - Folic acid;

11. Pantothenic acid - Calcium pantothenate, Panthenol;

12. Vitamin B_{12} - Cyanocobalamin, Hydroxycobalamin;

13. Vitamin K - Phytylmenaquinone;

14. Vitamin C - Ascorbic acid, Sodium ascorbate, Calcium ascorbate, Ascorbyl-6-palmitate;

15. Choline - Choline bitartrate, Choline chloride;

16. Inositol;

17. Selenium - Sodium selenite.

The product shall be free of lumps and shall be uniform in appearance. It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour.

It may contain food additive listed below, -

Food Additives	Maximum level in 100 ml of the ready-to-drink product
pH – adjusting agents Sodium hydroxide Sodium hydrogen carbonate Sodium carbonate Potassium hydroxide Potassium hydrogen carbonate Potassium carbonate Calcium hydroxide	Limited by Good Manufacturing Practice and within the limits for Sodium and Potassium in all types of infant formulae
Sodium citrate Potassium citrate L (+) Lactic acid producing cultures Citric acid	Limited by Good Manufacturing Practice in all types of infant formulae
Antioxidants Mixed tocopherols concentrate and L-Ascorbyl palmitate	1 mg in all types of infant formulae
Mono and Diglycerides	0.4 g

It shall conform to the following requirements namely:

1.	Moisture, per cent. by weight (not more than)	4.5

2.	Total milk protein, per cent. by weight (not less than) and	10.0
	not more than	16.0
3.	Total fat, per cent. by weight (not less than)	18.0
	Milk Fat, per cent. by weight (not less than)	12.0
	Linoleate, g per 100 g (not less than)	1.398
4.	Total ash, per cent. by weight (not more than)	8.5
5	Ash insoluble in dilute Hydrochloric acid, per cent. by weight (not more than)	0.1
6	Solubility: (a) Solubility Index (ml), maximum	2.0
	(b) Solubility per cent. by weight (not less than)	98.5
7.	Vitamin A (as retinol), µg per 100 g (not less than)	350
8.	Added Vitamin D (expressed as Cholecalciferol or Ergocalciferol), µg per 100g (not less than)	4.5
9.	Vitamin C, mg per 100 g (not less than)	35
10.	Thiamine, µg per 100 g (not less than)	185
11.	Riboflavin, µg per 100 g (not less than)	275
12.	Niacin, µg per 100 g (not less than)	1160
13.	Pyridoxine, µg per 100 g (not less than)	160
14.	Folic acid, µg per 100 g. (not less than)	20
15.	Pantothenic acid, mg per 100 g (not less than)	1.4
16.	Vitamin B_{12}, µg per 100 g (not less than)	0.7
17.	Choline, mg per 100 g (not less than)	32
18.	Vitamin K, µg per 100 g (not less than)	18
19.	Biotin, µg per 100 g (not less than)	7.0
20.	Vitamin E (as a-tocopherol compounds), IU per 100 g (not less than)	3.15

21.	Sodium, mg per 100 g (not less than)	90
22.	Potassium, mg per 100 g (not less than)	370
23.	Chloride, mg per 100 g (not less than)	250
24.	Calcium, mg per 100 g (not less than)	230
25.	Phosphorous, mg per 100 g (not less than)	115
26.	Magnesium, mg per 100 g (not less than)	22
27.	Iron, mg per 100 g (not less than)	5.0
28.	Iodine, µg per 100 g (not less than)	20
29.	Copper, µg per 100 g (not less than)	280
30.	Zinc, mg per 100 g (not less than) and	2.5
	not more than (mg)	5.0
31	Manganese, µg per 100g (not less than)	20
32.	Selenium, µg per 100 g (not less than)	14
33.	Bacterial count, per g (not more than)	10,000
34.	Coliform count absent in	0.1 g
35.	Yeast and mould count absent in	0.1 g
36.	Salmonella and Shigella absent in	25 g
37.	E. coli absent in	0.1 g
38.	Staphylococcus aureas absent in	0.1 g

[45][Provided that in ready to drink infant milk substitute, lecithin and ascrobyl palmitate may be used upto maximum limit of 0.5 gram./100ml., and 1mg./ 100ml. respectively]

Premature/Low birth weight infant milk substitutes-

Provided that the premature/low birth weight infant milk substitutes shall also meet the following requirement in addition to the requirements mentioned above: -

1. Protein shall be 2.25 - 2.75 g per 100 kcal;

2. Mineral contents shall not be less than 0.5 g per 100 kcal. The Calcium: Phosphorous ratio shall be 2:1. The Sodium, Potassium and Chloride combined together shall be not less than 40 milli equivalent per litre;

3. Whey: Casein ratio shall be 60:40. Essential amino acids should include taurine, cystine, tyrosine and histidine;

Lactose free infant milk substitute

Lactose and sucrose free infant milk substitute Sucrose free infant milk substitute:

Provided that the lactose free or lactose and sucrose free or sucrose free infant milk substitutes shall also meet the following requirement in addition to the requirements mentioned in the standard, provided that in these three products edible vegetable oil may be used in place of milk fat and lecithin may be used as an emulsifier: -

1. Soy protein-based, lactose-free formula shall have soy-protein and carbohydrate as glucose, dextrose, dextrin/maltodextrin, maltose and/or sucrose;

2. Lactose-free cow's/buffalo's milk-based formulas shall have carbohydrate as glucose, dextrose, dextrin/maltodextrin, maltose and sucrose:

Provided also that the lactose free or lactose and sucrose free or sucrose free infant milk substitutes shall conform to the following requirements, except the requirements of milk protein and milk fat, in the following manner, namely: -

(a) total protein, per cent. By weight shall not be less than 10.0 per cent. and not more than 16 per cent.;

(b) total fat, per cent by weight shall not be less than 18.0 per cent.; and

(c) the lactose in the product claimed to be lactose free shall not exceed 0.05 per cent.

Hypoallergenic infant milk substitutes

Provided that the Hypoallergenic infant milk substitutes shall also meet the following requirement in addition to the requirements mentioned in the standard: -

1. Protein shall be hydrolyzed whey or casein or;

2. 100% free amino acids as a protein source;

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallised film or in such a way to protect from deterioration. It shall be packed in nitrogen or a mixture of nitrogen and carbon dioxide."

Infant Foods

3. Milk-cereal based complementary food commonly called as weaning food or supplementary food means foods based on milk, cereal and/or legumes (pulses), soyabean, millets, nuts and edible oil seeds, processed to low moisture content and so fragmented as to permit dilution with water, milk or other suitable medium.

Milk-cereal based complementary food is intended to supplement the diet of infants after the age of six months.

Milk cereal based complementary food are obtained from milk, variety of cereals, pulses, soyabean, millets, nuts and edible oil seeds after processing. It may contain edible vegetable oils, milk solid, various carbohydrates such as sucrose, dextrose, dextrins/ maltodextrin, maltose and lactose, calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It shall contain a minimum of 10 per cent milk protein by weight of the product. It shall also contain minimum 5 per cent milk fat by weight. It shall not contain hydrogenated fats containing trans-fatty acids. It may contain fungal alfa amylase upto a maximum extent of 0.025 per cent. by weight, fruits and vegetables, egg or egg products. It may also include amino acids such as lysine, methionine, taurine, carnitine etc.

The source of Vitamin Compounds and Mineral Salts may be used from, -

1. Calcium (Ca) - Calcium carbonate, Calcium phosphate tribasic, Calcium sulphate;
2. Phosphorous (P) - Calcium phosphate tribasic;
3. Chloride (Cl) - Sodium chloride;
4. Iron (Fe) - Hydrogen reduced iron, Electrolytic iron;
5. Magnesium (Mg) - Magnesium chloride, Magnesium oxide, Magnesium phosphate dibasic;
6. Sodium (Na) - Sodium chloride;
7. Zinc (Zn) - Zinc sulphate;

Vitamins

1. Vitamin A - Retinyl acetate, Retinyl palmitate, Retinyl propionate;

2. Provitamin A - Beta-carotene;

3. Vitamin D - Vitamin D_2 -Ergocalciferol, Vitamin D_3 -Cholecalciferol, Cholecalciferol-cholesterol;

4. Vitamin E - d-alpha-tocopherol, dl-alpha-tocopherol, d-alpha-tocopheryl acetate, dl-alpha-tocopheryl acetate, d-alpha-tocopheryl succinate, dl-alpha-tocopheryl succinate;

5. Thiamine (Vitamin B_1) - Thiamine chloride hydrochloride, Thiamine mononitrate;

6. Riboflavin (Vitamin B_2) -Riboflavin, Riboflavin 5' -phosphate sodium;

7. Niacin - Nicotinamide, Nicotinic acid;

8. Vitamin B_6 - Pyridoxine hydrochloride;

9. Biotin (Vitamin H) - d-biotin;

10. Folacin - Folic acid;

11. Pantothenic acid - Calcium pantothenate, Panthenol;

12. Vitamin B_{12} - Cyanocobalamin, Hydroxycobalamin;

13. Vitamin K - Phytylmenaquinone;

14. Vitamin C - Ascorbic acid, Sodium ascorbate, Calcium ascorbate, Ascorbyl-6-palmitate;

15. Choline - Choline bitartrate, Choline chloride;

16. Inositol;

17. Selenium- Sodium selenite.

It shall be in the form of powder, small granules or flakes, free from lumps and shall be uniform in appearance.

It shall be free from dirt and extraneous matter and free from preservatives and added colour and flavour. It shall be free from any material, which is harmful to human health.

It may contain the following additives, -

Emulsifiers	Maximum level in 100 g of the product on a dry weight basis
Lecithin	1.5 g
Mono and Diglycerides	1.5 g

PH – adjusting agents Sodium hydrogen carbonate Sodium carbonate Sodium citrate Potassium hydrogen carbonate Potassium carbonate Potassium citrate Sodium hydroxide Calcium hydroxide Potassium hydroxide L (+) Lactic acid Citric acid	Limited by Good Manufacturing Practice within the limit for sodium
Antioxidants Mixed tocopherols concentrate ∞- Tocopherol	300 mg/ kg fat, singly or in combination
L-Ascorbyl Palmitate	200 mg/ kg fat

It shall conform to the following requirements, namely: -

1.	Moisture, per cent. by weight (not more than)	5.0
2.	Total protein, per cent. by weight (not less than)	15.0
3.	Fat, per cent. by weight (not less than)	7.5
4.	Total Carbohydrate, per cent. by weight (not less than)	55.0
5.	Total ash, per cent. by weight (not more than)	5.0
6.	Ash insoluble in dilute Hydrochloric acid, per cent. by weight (not more than)	0.1
7.	Crude fibre (on dry basis) per cent. by weight (not more than)	1.0
8.	Vitamin A (as retinol) µg per 100 g (not less than)	350
9.	Added Vitamin D, µg per 100 g (expressed as Cholecalciferol or Ergocalciferol (not less than)	5
10.	Vitamin C, mg per 100 g (not less than)	25
11.	Thiamine (as hydrochloride), mg per 100 g (not less than)	0.5
12.	Riboflavin, mg per 100 g (not less than)	0.3
13.	Niacin, mg per 100 g (not less than)	3.0
14.	Folic acid, µg per 100 g (not less than)	20
15.	Iron, mg per 100 g (not less than)	5.0

16.	Zinc, mg per 100 g (not less than)	2.5
	and not more than (mg)	5.0
17.	Bacterial count, per g (not more than)	10,000
18.	Coliform count absent in	0.1 g
19.	Yeast and mould count absent in	0.1 g
20.	Salmonella and Shigella absent in	25 g
21.	E. coli absent in	0.1 g
22.	Staphylococcus aureas absent in	0.1 g

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallised film or in such a way to protect from deterioration.

4. Processed cereal based complementary food commonly called as weaning food or supplementary food means foods based on cereal and/or legumes (pulses), soyabean, millets, nuts and edible oil seeds, processed to low moisture content and so fragmented as to permit dilution with water, milk or other suitable medium.

Processed cereal based complementary food are intended to supplement the diet of infants after the age of six months and up to the age of two years.

Processed cereal based complementary food are obtained from variety of cereals, pulses, soyabean, millets, nuts and edible oil seeds after processing. It shall contain milled cereal and legumes combined not less than 75 per cent. Where the product is intended to be mixed with water before consumption, the minimum content of protein shall not be less than 15 per cent. on a dry weight basis and the PER shall not be less than 70 per cent. of that of casein. The sodium content of the products shall not exceed 100 mg/100 g of the ready-to-eat product.

Hydrogenated fats containing trans-fatty acids shall not be added to the products. It may also contain following ingredients: - protein concentrates, essential amino acids (only natural L forms of amino acids shall be used), iodized salt; milk and milk products; eggs; edible vegetable oils and fats; fruits and vegetables; various carbohydrates such as sucrose, dextrose, dextrin, maltose dextrin, lactose, honey, corn syrup; malt; potatoes.

The source of Vitamin Compounds and Mineral Salts may be used from,-

1. Calcium (Ca) - Calcium carbonate, Calcium phosphate tribasic, Calcium sulphate;
2. Phosphorous (P) - Calcium phosphate tribasic, Phosphoric acid;
3. Chloride (Cl) - Sodium chloride, Hydrochloric acid;
4. Iron (Fe) - Hydrogen reduced iron, Electrolytic iron;

5. Sodium (Na) - Sodium chloride;

6. Zinc (Zn) - Zinc acetate, Zinc chloride, Zinc oxide, Zinc sulphate;

Vitamins

1. Vitamin A - Retinyl acetate, Retinyl palmitate, Retinyl propionate;

2. Provitamin A - Beta-carotene;

3. Vitamin D - Vitamin D_2 - Ergocalciferol, Vitamin D_3 - Cholecalciferol, Cholecalciferol-cholesterol;

4. Vitamin E - d-alpha-tocopherol, dl-alpha-tocopherol, d-alpha-tocopheryl acetate, dl-alpha-tocopheryl acetate, d-alpha-tocopheryl succinate, dl-alpha-tocopheryl succinate;

5. Thiamine (Vitamin B_1) - Thiamine chloride hydrochloride, Thiamine mononitrate;

6. Riboflavin (Vitamin B_2) - Riboflavin, Riboflavin 5' -phosphate sodium;

7. Niacin - Nicotinamide, Nicotinic acid;

8. Vitamin B_6 - Pyridoxine hydrochloride;

9. Biotin (Vitamin H) - d-biotin;

10. Folacin - Folic acid;

11. Pantothenic acid - Calcium pantothenate, Panthenol;

12. Vitamin B_{12} - Cyanocobalamin, Hydroxycobalamin;

13. Vitamin K - Phytylmenaquinone;

14. Vitamin C - Ascorbic acid, Sodium ascorbate, Calcium ascorbate, Ascorbyl-6-palmitate;

15. Choline - Choline bitartrate, Choline chloride;

16. Inositol;

17. Selenium- Sodium selenite.

It shall be in the form of powder, small granules or flakes, free from lumps and shall be uniform in appearance.

All ingredients, including optional ingredients, shall be clean, safe, suitable and of good quality. It shall be free from preservatives, added colour and flavour.

It may contain the following food additives: -

Name of the Food Additives	*Maximum Level in a 100 g of Product on a dry weight basis*
Emulsifiers	
Lecithin	1.5 g
Mono and Diglycerides	1.5 g
pH adjusting agents	
Sodium hydrogen carbonate	Limited by Good Manufacturing Practice and within the limits for sodium
Potassium hydrogen carbonate Calcium carbonate}	Limited by Good Manufacturing Practice
L(+) lactic acid	1.5 g
Citric acid	2.5 g
Antioxidants	
Mixed tocopherols concentrate Alpha-tocopherol	300 mg/kg fat, singly or in combination
L-Ascorbyl palmitate	200 mg/kg fat
L-Ascorbic acid and its sodium and potassium salts	50 mg, expressed as ascorbic acid and within limits for sodium
Enzymes	
Malt carbohydrates	Limited by Good Manufacturing Practice
Leavening Agents	
Ammonium carbonate} Ammonium hydrogen carbonate}	Limited by Good Manufacturing Practice

It shall also conform to the following requirements namely: -

1.	Moisture, per cent. by weight (not more than)	4.0
2.	Total protein, per cent. by weight (not less than)	15.0
3.	Total Carbohydrate, per cent. by weight (not less than)	55.0
4.	Total ash, per cent. by weight (not more than)	5.0
5.	Ash insoluble in dilute Hydrochloric acid, per cent. by weight (not	0.1

	more than)	
6.	Crude fibre (on dry basis) per cent. by weight (not more than)	1.0
7.	Vitamin A (as retinol), µg per 100 g (not less than)	350
8.	Added Vitamin D, µg per 100 g (expressed as Cholecalciferol or Ergocalciferol (not less than)	5
9.	Vitamin C, mg per 100 g (not less than)	25
10.	Thiamine (as hydrochloride), mg per 100 g (not less than)	0.5
11.	Riboflavin, mg per 100 g (not less than)	0.3
12.	Niacin, mg per 100 g (not less than)	3.0
13.	Folic acid, µg per 100 g (not less than)	20.0
14.	Iron, mg per 100 g (not less than)	5.0
15.	Zinc, mg per 100 g (not less than)	2.5
	and not more than (mg)	5.0
16.	Bacterial count, per g. (not more than)	10,000
17.	Coliform count absent in	0.1 g
18.	Yeast and mould count absent in	0.1 g
19.	Salmonella and Shigella absent in	25 g
20.	E. coli absent in	0.1 g
21.	Staphylococcus aureas absent in	0.1 g

It shall be packed in hermetically sealed clean and sound containers or in flexible pack made from film or combination of any or the substrate made of board paper, polyethylene, polyester, metalised film or aluminium foil in such a way to protect from deterioration:

Provided that the processed cereal based complementary foods for use in specific conditions, where protein needs to be restricted and where other cereals like wheat, soya, legumes and milk cannot be used, such processed cereal based complementary foods shall be prepared with single cereal like rice or ragi, which shall have the minimum protein content of 6-9 per cent., such products shall be conspicuously labelled, “Processed Mono Cereal Based Complementary Food for use in specific conditions under medical guidance only”.

5. Follow-Up Formula-Complementary Food means the product prepared by spray drying of the milk of cow or buffalos or mixture thereof. It may contain vegetable protein. Follow-up formula based on milk shall be prepared from ingredients mentioned below except that a minimum

of 3 g per 100 available Calories (or 0.7 g per 100 kJ) of protein shall be derived from whole or skimmed milk as such, or with minor modification that does not substantially impair the vitamin or mineral content of the milk and which represents a minimum of 90 per cent. of the total protein.

It may contain algal and fungal oil as sources of Docosahexaenoic Acid (DHA) and Arachidonic Acid (ARA) from Crypthecodinium cohnii, Morterella alpine, Schizochytrium sp., and Ulkenia sp. At the level of maxium 0.5 per cent. DHA of total fatty acids and ratio of ARA:DHA as 1:1 minimum:

Provided that DHA content shall not be less than 0.2 per cent. of total fatty acids, if a claim related to the addition of DHA is made.

Follow-up formula for use as a liquid part of the complementary diet for infants after the age of six months and up to the age of two years when prepared in accordance with the instructions for use, 100 ml of the ready-for-consumption product shall provide not less than 60 kcal (or 250 kJ) and not more than 85 kcal (or 355 kJ).

Follow-up formula shall contain the following nutrients indicated below,

(1) Protein - Not less than 3.0 g per 100 available calories (or 0.7 g per 100 available kJ).

Not more than 5.5 g per 100 available calories (or 1.3 g per 100 available kJ).

(Protein shall be of nutritional quality equivalent to that of casein or a greater quantity of other protein in inverse proportion to its nutritional quality. The quality of the protein shall not be less than 85 per cent. of that of casein).

Essential amino acids may be added to follow-up formula to improve its nutritional value. Only L forms of amino acids shall be used.

(2) Fat - Not less than 4 g per 100 available calories (0.93 g per 100 available kJ)

Not more than 6 g per 100 available calories (1.4 g per 100 available kJ)

Linoleic acid (in the form of glyceride) - Not less than 310 mg (per 100 Calories or 74.09 mg per 100 available kJ)

The products shall contain nutritionally available carbohydrates suitable for the feeding of the older infant and young child in such quantities as to adjust the product to the energy density in accordance with the requirements given above.

It may also contain other nutrients when required to ensure that the product is suitable to form part of a mixed feeding scheme intended for use after six months of age. When any of these nutrients is added, the food shall contain not less than Recommended Dietary Allowances (RDA) amounts of these nutrients.

The source of Mineral Salts and Vitamin Compounds may be used from, -

1. Calcium (Ca)-Calcium carbonate, Calcium chloride, Calcium citrate, Calcium phosphate monobasic, Calcium phosphate dibasic, Calcium phosphate tribasic;

2. Phosphorous (P)- Calcium phosphate monobasic, Calcium phosphate dibasic, Calcium phosphate tribasic, Magnesium phosphate dibasic, Potassium phosphate dibasic;
3. Chloride (Cl)-Calcium chloride, Choline chloride, Magnesium chloride, Manganese chloride, Sodium chloride, Sodium chloride iodized;

4. Iron (Fe)- Ferrous citrate Ferrous lactate, Ferrous sulphate, Ferric pyrophosphate;

5. Magnesium (Mg)- Magnesium chloride, Magnesium oxide, Magnesium phosphate dibasic;

6. Sodium (Na)- Sodium bicarbonate, Sodium chloride, Sodium chloride iodized, Sodium citrate, Sodium phosphate monobasic;

7. Potassium (K)- Potassium phosphate dibasic;

8. Copper (Cu)- Cupric citrate, Cupric sulphate;

9. Iodine (I)-Potassium iodide, Sodium iodide;

10. Zinc (Zn)- Zinc sulphate;

11. Source of Manganese (Mn)- Manganese chloride, Manganese sulphate.

Vitamins

1. Vitamin A - Retinyl acetate, Retinyl palmitate, Retinyl propionate;

2. Provitamin A - Beta-carotene;

3. Vitamin D - Vitamin D_2 - Ergocalciferol, Vitamin D_3 - Cholecalciferol, Cholecalciferol-cholesterol;

4. VitaminE-d-alpha-tocopherol, dl-alpha-tocopherol, d-alpha-tocopheryl acetate, dl-alpha-tocopheryl acetate, d-alpha-tocopheryl succinate, dl-alpha-tocopheryl succinate;

5. Thiamine (Vitamin B_1) - Thiamine chloride hydrochloride, Thiamine mononitrate;

6. Riboflavin (Vitamin B_2) - Riboflavin, Riboflavin 5' -Phosphate sodium;

7. Niacin-Nicotinamide, Nicotinic acid;

8. Vitamin B_6 - Pyridoxine hydrochloride;

9. Biotin (Vitamin H) - d-biotin;

10. Folacin - Folic acid;
11. Pantothenic acid - Calcium pantothenate, Panthenol;
12. Vitamin B_{12} - Cyanocobalamin, Hydroxycobalamin;
13. Vitamin K - Phytylmenaquinone;
14. Vitamin C - Ascorbic acid, Sodium ascorbate, Calcium ascorbate, Ascorbyl-6-palmitate;
15. Choline - Choline bitartrate, Choline chloride;
16. Inositol;
17. Selenium - Sodium selenite.

The product shall be free of lumps and shall be uniform in appearance. It shall be free from added starch and added colour and flavour. It shall not have rancid taste and musty odour.

It may contain the following additives, -

	Maximum Level in 100 ml of Product Ready-for-Consumption
pH-Adjusting Agents Sodium hydrogen carbonate} Sodium carbonate} Sodium citrate} Potassium hydrogen carbonate} Potassium carbonate} Potassium citrate} Sodium hydroxide} Calcium hydorxide} Potassium hydroxide} L(+) Lactic acid} Citric acid}	Limited by Good Manufacturing Practice within the limit for sodium
Antioxidants	

Mixed tocopherols concentrate} ∞ - Tocopherol}	3 mg singly or in combination
L-Ascorbyl palmitate}	5 mg singly or in combination.

It shall also conform to the following requirements, -

S. No.	Characteristics	Requirements
1.	Moisture, per cent. by weight (not more than)	4.5
2.	Total milk protein, per cent. by weight (not less than) and	13.5
	(not more than)	24.75
3.	Total fat, per cent. by weight (not less than) and	18.0
	(not more than)	27.0
	Linoleate per 100 g (not less than)	1.398
4.	Total ash, per cent. by weight (not more than)	8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent. by weight (not more than)	0.1
6.	Solubility:	
	Solubility Index (ml), maximum	2.0
	Solubility per cent. by weight (not less than)	98.5
7.	Vitamin A (as retinol), µg per 100 g (not less than)	350
8.	Added Vitamin D (expressed as Cholecalciferol or Ergocalciferol),	
	µg per 100 g (not less than)	4.5
9.	Vitamin C, mg per 100 g (not less than)	36
10.	Thiamin, µg per 100 g (not less than)	180
11.	Riboflavin, µg per 100 g (not less than)	270
12.	Niacin, µg per 100 g (not less than)	1125
13.	Pyridoxine, µg per 100 g (not less than)	202.50

14.	Folic acid, µg per 100 g (not less than)	20.0
15.	Pantothenic acid, mg per 100 g (not less than)	1.35
16.	Vitamin B12, µg per 100 g (not less than)	0.675
17.	Choline, mg per 100 g (not less than)	32
18.	Vitamin K, µg per 100 g (not less than)	18
19.	Biotin, µg per 100 g (not less than)	6.75
20.	Vitamin E (as a- tocopherol compounds), I.U. per 100g (not less than)	3.15
21.	Sodium, mg per 100 g (not less than)	90
22.	Potassium, mg per 100 g (not less than)	360
23.	Chloride, mg per 100 g (not less than)	247.50
24.	Calcium, mg per 100 g (not less than)	405
25.	Phosphorous, mg per 100 g (not less than)	270
26.	Magnesium, mg per 100 g (not less than)	27
27.	Iron, mg per 100 g (not less than)	5
28.	Iodine, µg per 100 g (not less than)	22.50
29.	Copper, µg per 100 g (not less than)	280
30.	Zinc, mg per 100 g (not less than) and	2.5
	not more than (mg)	5.0
31.	Manganese, µg per 100 g (not less than)	20
32.	Selenium, µg per 100 g (not less than)	14
33.	Bacterial count, per g (not more than)	10,000
34.	Coliform count absent in	0.1g
35.	Yeast and mould count absent in	0.1g
36.	Salmonella and Shigella absent in	25 g
37.	E. coli absent in	0.1g
38.	Staphylococcus aureas absent in	0.1g

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallised film or in such a way to protect from deterioration. It shall be packed in nitrogen or a mixture of nitrogen and carbon dioxide.

2.1.20 Standards for Edible Lactose

This Standard applies to Edible Lactose as defined in item 1 of this sub-regulation.*

1. Description.-

Lactose is a white to light yellow crystalline, slightly sweet disaccharide sugar found in milk.

2. Essential Composition and Quality Factors.-

(a) Raw Materials.-

- Whey

(b) Composition.-

Sl. No.	Parameters	Limits
1.	Total moisture, maximum, %, (m/m)	6.0
2.	Lactose, minimum, %, (m/m), on dry basis	99.0
3.	Sulphated ash, maximum, %, (m/m)	0.3
4.	pH (10% solution)	4.5-7.0
5.	Scorched particle, maximum	Disc B

3. Food Additives.-

For products covered under this standard, specific food additives specified in Appendix 'A' of these regulations may be used and only within the limits specified.

4. Contaminants, Toxins and Residues.-

The products shall comply with the limits stipulated under the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Hygiene.-

(a) The products shall be prepared and handled in accordance with the requirements specified in the Schedule 4, as acceptable, of the Food Safety and Standards (Licensing and

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

Registration of Food Businesses) Regulations, 2011 and any such guidelines provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(b) The products shall conform to the microbiological requirements specified in Appendix 'B' of these regulations.

6. Labelling.-

(a) The name of the product shall be edible lactose.

(b) The provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply to pre-packaged product.

7. Methods of Sampling and Analysis.-

The methods of sampling and analysis mentioned in the manuals as specified by the Food Safety and Standards Authority of India from time to time shall be applicable.]

[55]**[2.1.21 Milk Protein Concentrate**:

This Standard applies to Milk Protein Concentrate as defined in item 1 of this sub-regulation.[4]

1. Description: Milk Protein Concentrates are complex milk proteins that contain both casein and whey protein in their native form in the same and similar ratio as milk depending upon their milk protein contents, which are generally manufactured by suitable processes that remove the majority of lactose and soluble minerals while retaining milk protein, followed by drying.

2. Essential Composition and Quality Factors. -

(a) Raw Materials. -

Milk, skimmed milk, cream and water

(b) Composition. –

The product shall conform to the compositional specifications provided in the table below:

TABLE

Sl. No. (1)	Parameters (2)	Limits

[4] This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

		(3)
1.	Moisture, maximum, %, (m/m)	6.0
2.	Milk Protein**, minimum, %, (m/m)	40.0
3.	Insolubility index, maximum, (ml)	2.0
4.	Total ash, maximum, %, (m/m) (on dry basis)	10.0
5.	Scorched particles, maximum	Disc B (15 mg)

** Protein content is 6.38 multiplied by the total nitrogen determined

3. Food Additives: For products covered under this standard, food additives specified for milk powders in Appendix 'A' may be used and only within the limits specified.

4. Hygiene: The product shall conform to the microbiological requirements specified for milk powder in Appendix 'B'.

5. Labelling.-

(a) The name of the food shall be 'Milk Protein Concentrate'. The name of the product may be supplemented by the designation "MPC __", the blank being filled with the figure, indicating the protein content of the product.

(b) The milk protein content shall be declared on the label as a percentage by mass.

2.1.22 Whey Protein Concentrate: This Standard applies to Whey Protein Concentrate as defined in item 1 of this sub-regulation. *

1.Description.-

Whey protein concentrate means a product obtained by removing non-protein constituents from whey by means of physical separation techniques such as precipitation, filtration, dialysis and other relevant techniques, followed by drying.

2. Essential Composition and Quality Factors.-

(a) Raw Materials.-
Whey, Acid whey

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

(b) Composition.-

The product shall conform to the compositional specifications provided in the table below:

TABLE

Sl. No. (1)	Parameters (2)	Limits (3)
1.	Moisture, maximum, %, (m/m)	6.0
2.	Milk Protein**, minimum, %, (m/m)	35.0
3.	Milk Fat, maximum, %, (m/m)	10
4.	Scorched particles, maximum	Disc B (15 mg)

* * Protein content is 6.38 multiplied by the total nitrogen determined

3. Food Additives: For products covered under this standard, food additives specified for whey powder in Appendix 'A' may be used and only within the limits specified.

4. Hygiene: The product shall conform to the microbiological requirements specified for whey based powder in Appendix 'B'.

5. Labelling.-

(a) The name of the food shall be 'Whey Protein Concentrate'.

(b) The milk protein content shall be declared on the label as a percentage by mass.

2.1.23 Standard for Cow or Buffalo Colostrum and Colostrum products: This Standard applies to colostrum and colostrum products as defined in item 1 of this sub-regulation. *

1. Description.-

(a) "Colostrum" means the lacteal secretion from the mammary glands of cow or buffalo or a combination thereof obtained upto three to five days of parturition and preceding

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

the production of milk, which typically contains fat, proteins, carbohydrates, vitamins, minerals and bioactive components (such as immunoglobulins and lactoferrin).

(b) "Colostrum-based products" means processed products resulting from the processing of colostrum or from further processing of such processed products

(c) "Colostrum powder" is a colostrum-based product obtained by the drying of colostrum by suitable methods while retaining the essential characteristics of colostrum.

2. Essential composition and quality factors.-

(I) Colostrum

(a) Composition.-

The products shall conform to the compositional specifications provided in the table below:

Sl. No.	Parameters	Requirements
(1)	(2)	(3)
1.	Appearance	Creamy yellow colour
2.	Odour	Characteristic and pleasant
3.	Taste	Characteristic and pleasant
4.	Moisture, maximum, %, (m/m)	80.0
5.	Protein*, minimum, %, (m/m)	7.0
6.	Fat, minimum, %, (m/m)	4.0
7.	Immunoglobulins, minimum, %, (m/m)	1.8
8.	Lactoferrin, minimum, %, (m/m)	0.2

* Protein content is 6.38 multiplied by the total nitrogen determined

(II) Colostrum powder.-

(a) Raw Materials.-

Cow or Buffalo Colostrum

(b) Composition.-

The products shall conform to the compositional specifications provided in the table below:

Sl. No.	Parameters	Requirements
(1)	(2)	(3)
1.	Appearance	Creamy yellow colour
2.	Odour	Characteristic and pleasant
3.	Taste	Characteristic and pleasant
4.	Moisture, maximum, %, (m/m)	4.0
5.	Protein*, minimum, %, (m/m)	40.0
6.	Fat, minimum, %, (m/m)	17.5
7.	Total ash, maximum, %, (m/m) (on dry basis)	9.0
8.	Immunoglobulins, minimum, %, (m/m)	12.5
9.	Lactoferrin, minimum, %, (m/m)	1.2
10.	Scorched particles, maximum	Disc B (15 mg)

* Protein content is 6.38 multiplied by the total nitrogen determined

3. Food Additives. -

(a) Colostrum shall not contain any food additives.

(b) For colostrum powder, stabilizers, emulsifiers and antioxidants as specified for milk powder in Appendix 'A', may be used and only within the limits specified.

4. Hygiene: The product shall conform to the microbiological requirements specified for milk powder in Appendix 'B'.

5. Labelling. -

(a) The name of the products covered by sub- item (a) of item 1 shall be "colostrum".

(b) The name of the products covered by sub- item (b) of item 1 shall be "colostrum powder".]

[68][**2.1.24 Standards for Dairy Permeate Powders**

This Standard applies to Dairy permeate powder as defined in item 1 of this sub regulation.[5]

1. Description.-

(a) "Dairy permeate powders" are dried milk products characterised by a high content of lactose

(i) manufactured from permeates which are obtained by removing, through the use of membrane filtration, and to the extent practical, milk fat and milk protein, but not lactose, from milk, whey, cream or sweet buttermilk or both, or from similar raw materials; or

(ii) obtained by other processing techniques involving removal of milk fat and milk protein, but not lactose, from the same raw materials listed under entry (a) and resulting in an end-product with the same composition as specified in entry (c) of item 2.

(b) "whey permeate powder" is the dairy permeate powder manufactured from whey permeate obtained by removing whey protein, but not lactose, from whey.

(c) "milk permeate powder" is the dairy permeate powder manufactured from milk permeate.

2. Essential composition and quality factors.-

(a)Raw materials.-

(i) Dairy permeate powders: milk permeate, whey permeate, cream permeate, sweet buttermilk permeate and/or similar lactose-containing milk products
(ii) whey permeate powder: whey permeate
(iii) milk permeate powder: milk permeate

(b) Permitted ingredients.-Seed lactose in the manufacture of pre-crystallised products.

(c) Composition.-

Parameters	Dairy permeate powder	Whey permeate powder	Milk permeate powder
(1)	(2)	(3)	(4)
Lactose, anhydrous*, minimum, %, (m/m)	76.0%	76.0%	76.0%

*This standard should be read along with sub-regulation 2.1.1 relating to General Standard for Milk and Milk Products with reference to the generic provisions pertaining to definitions of milk or milk products and heat treatments, guidelines for use of dairy terms, addition of micronutrients, etc.

Maximum nitrogen, (m/m)	1.1%	1.1%	0.8%
Milk Fat, maximum, %, (m/m)	1.5%	1.5%	1.5%
Ash, Maximum,(m/m)	14.0%	12.0%	12.0%
Moisture**, maximum, %, (m/m)	5.0%	5.0%	5.0%
Scorched particles, maximum	Disc B	Disc B	Disc B

* Although the products may contain both anhydrous lactose and lactose monohydrate, the lactose content is expressed as anhydrous lactose. 100 parts of lactose monohydrate contains 95 parts of anhydrous lactose.

** The moisture content does not include the water of crystallization of the lactose.

3. Food Additives.-

(a) For products covered under this standard, specific food additives permitted in Appendix 'A' of these regulations may be used and only within the limits specified.

(b) Safe and suitable processing aids may be used under condition of good manufacturing practices. These may also including substances (hydrochloric acid, calcium hydroxide, potassium hydroxide and sodium hydroxide) changing the pH to improve process efficiency such as flux rates and preventing fouling in product streams.

4. Hygiene.-

The products shall conform to the microbiological requirements specified for milk powders in Appendix 'B' of these regulations.

5. Labelling.-

(a) According to the composition in sub-item (c) of item 2, the name of the food shall be "lactose-rich deproteinized ……permeate powder" where the blank may be filled with the term dairy, milk or whey, as appropriate to the nature of the product.]

2.2: FATS, OILS AND FAT EMULSIONS

2.2.1 OILS:

1. **Coconut oil (naryal ka tel)** means the oil expressed from copra obtained from the kernel

of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards: —

Butyro-refractometer reading at 40°C	34.0 to 35.5
OR	
Refractive Index at 40°C	1.4481-1.4491

Amendment for substitution of highlighted provision
[77][1.4480- 1.4500]
[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

Saponification value	Not less than 250
Iodine value	7.5 to 10.
Polenske Value	Not less than 13
Unsaponifiable matter	Not more than 1.0 per cent.
Acid value	Not more than 6.0.

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these regulations and appendices.
[26][****]

[39][1 (A) **Virgin Coconut Oil** means the oil expressed from the kernel of *Cocos nucifera* nuts by mechanical or natural means with or without the application of heat, which does not lead to alteration of the oil and virgin coconut oil is suitable for human consumption in its natural state without refining. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil and it shall conform to the following standards, namely: –

S. No.	Parameters	Limits
1.	Refractive index at 40°C	1.4480 - 1.4492
2.	Moisture	Not more than 0.5 per cent by weight
3.	Insoluble impurities	Not more than 0.05 per cent by weight
4.	Saponification Value	Not less than 250
5.	Iodine value	4.0 – 11.0
6.	Unsaponifiable matter	Not more than 0.5 per cent by weight
7.	Acid Value	Not more than 4.0
8.	Polenske Value	Not less than 13
9.	Peroxide Value	Not more than 15 milliequivalent per kg of oil

Test for argemone oil shall be negative.

(i) **Food Additives** not permitted.

(ii) **Contaminants, Toxins and Residues:** The product shall comply with the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

(iii) **Hygiene:** The products shall be prepared and handled in accordance with the practices prescribed in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such practices prescribed from time to time under the provisions of the Food Safety and Standard Act, 2006.

The product shall conform to the microbiological requirement prescribed in Appendix B.

(iv) **Labelling:** The provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply.

(v) **Methods of Sampling and Analysis:** As provided in the relevant Food Safety and Standards Authority of India Manual of Methods of Analysis of Food.]

2. **Cotton seed oil (binola ka tel**) means the oil extracted from clean, sound delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40°C		55.6 to 60.2
	OR	
Refractive Index at 40°C		1.4630-1.4660
Saponification value		190 to 198
[14][Iodine value		98 to 123]
Unsaponifiable matter		Not more than 1.5 per cent.
Acid value		Not more than 0.50

There shall be no turbidity after keeping the filtered sample at 30°C for 24 hours

[72][****]

Test for Argemone oil shall be negative

However, it may contain food additives permitted in these regulations and appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 0.5 ppm.

3. **Groundnut oil (moongh-phali-ka tel)** means the oil expressed from clean and sound groundnuts (Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring substances or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40°C	54.0 to 57.1
	OR
Refractive Index at 40°C	1.4620-1.4640
Saponification value	188 to 196
Iodine value	85 to 99
Unsaponifiable matter	Not more than 1.0 per cent.
Acid value	Not more than 6.0
[72][****]	

Test for argemone oil shall be negative.
However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

[39][4. **Flaxseed or Linseed oil (tisi ka tel)** means the oil obtained by process of expressing clean and sound Flaxseed or Linseed (linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance, or mineral oil. It shall conform to the following standards, namely:—

S. No.	Parameters	Limits
1.	Butyro-refractometer reading at 40°C Or Refractive Index at 40°C	69.5-74.3 1.4720-1.4750
2.	Saponification value	188 to 195

3.	Iodine value	Not less than 170
4.	Unsaponifiable matter	Not more than 1.5 per cent
5.	Acid value	Not more than 4.0

Test for argemone oil shall be negative.
However, it may contain food additives permitted in these Regulations and Appendices.

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm.]

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

5. **Mahua oil** means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassi latifolia or B. longifolia or a mixture of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall be refined and shall conform to the following standards:—

Butyro-refractometer reading at 40°C	49.5 to 52.7
Or	
Refractive Index at 40°C	1.4590 - 1.4611
Saponification value	187 to 196
Iodine value	58 to 70
Unsaponifiable matter	Not more than 2.0 per cent
Acid value	Not more than 0.50

Test for argemone oil shall be negative

However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into

India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.00 ppm.

[54][6. **Rapeseed oil (toria oil) or mustard oil (sarson ka tel)** means the oil expressed from clean and sound mustard seeds belonging to the compestris, juncea or napus varieties of Brassica which is clear and free from rancidity, suspended or foreign matter, separated water, added colouring or flavouring substances and mineral oil and conforms to the following parameters and limits, namely:-

S. No.	Parameters	Limits
1.	Butyro-refractometer reading at 40°C OR Refractive index at 40°C	58.0 to 60.5; or 1.4646 to 1.4662
2.	Saponification value	168-177
3.	Iodine value	96-112: Polybromide test shall be Negative
4.	Unsaponifiable matter	Not more than 1.2 per cent by weight
5.	Acid value	Not more than 6.0
6.	[72][****]	
7.	Test for Hydrocyanic Acid	Passes the test

Note 1.-Test for Argemone oil shall be negative.
Note 2.-The oil may be labelled as Kachi Ghani or Cold Pressed if the content of natural allyl isothiocyanate in the oil is not less than 0.20 % by weight.

Note 3.- The oil may contain food additives permitted in these regulations and appendices.

Note 4.- Where the oil is obtained by the method of solvent extraction or in the case of oil imported into India, whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining in accordance with the standards laid down under regulation 2.2.1 (16) and shall not contain Hexane more than 5.00 ppm]

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation

2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

[39][**7. Rapeseed or mustard oil-low erucic acid** means the oil obtained from clean and sound, low erucic acid oil bearing seeds of rapeseed belonging to compestris, juncea, or napus varieties of Brassica by the method of expression or solvent extraction and it shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil and shall contain not more than 2 % erucic acid (as % of total fatty acids) and shall conform to the following standards, namely:-

S. No.	Parameters	Limits
1.	Butyro-refractometer reading at 40°C OR Refractive index at 40°C	58.6 to 61.7 1.465 to 1.467
2.	Iodine value (Wij's method)	105 to 126
3.	Saponification value	182-193
4.	Unsaponifiable matter	Not more than 20g/kg
5.	Acid value	Not more than 6.0
6.	[72][****]	
7.	Test for Hydrocyanic Acid (Ferric Chloride test)	Passes the test

Test for argemone oil shall be negative.

Further, Rapeseed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standard laid down under regulation 2.2.1 (16) except acid value which shall be not more than 0.6. Additionally, it shall have Flash Point (Pensky Marten Closed Method) not less than 250°C and the oil so refined shall contain Hexane not more than 5.00 ppm:

Provided further that it may contain food additives permitted under these Regulations and Appendices.]

[3][**8 (1) Description:**

(i) **Olive oil** is the oil obtained solely from the fruit of the olive tree (Olea europaea L.), to the

exclusion of oils obtained using solvents or re-esterification processes and of any mixture with oils of other kinds and it shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

(ii) **Virgin olive oils** are the oils obtained from the fruit of the olive tree solely by mechanical or other physical means under conditions, particularly thermal conditions, that do not lead to alterations in the oil, and which have not undergone any treatment other than washing, decanting, centrifuging and filtration and it shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

(iii) **Olive-pomace oil** is the oil obtained by treating olive pomace with solvents or other physical treatments, to the exclusion of oils obtained by re-esterification processes and of any mixture with oils of other kinds and it shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

(2) Essential composition and quality factors:

(A) (i) **Refined olive oil**: Olive oil obtained from virgin olive oils by refining methods which do not lead to alterations in the initial glyceridic structure and it has a free acidity(FFA), expressed as oleic acid, of not more than 0.3 grams per 100 grams.

(ii) **Olive oil**: Oil consisting of a blend of refined olive oil and virgin olive oils suitable for human consumption and it has a free acidity(FFA), expressed as oleic acid, of not more than 1 gram per 100 grams.

(iii) **Extra virgin olive oil**: Virgin olive oil with a free acidity (FFA), expressed as oleic acid, of not more than 0.8 grams per 100 grams.

(iv) **Virgin olive oil**: Virgin olive oil with a free acidity (FFA), expressed as oleic acid, of not more than 2.0 grams per 100 grams.

(v) **Ordinary virgin olive oil**: Virgin olive oil with a free acidity (FFA), expressed as oleic acid, of not more than 3.3 grams per 100 grams.

(vi) **Refined olive-pomace oil**: Oil obtained from crude olive-pomace oil by refining methods which do not lead to alterations in the initial glyceridic structure and it has a free acidity (FFA), expressed as oleic acid, of not more than 0.3 grams per 100 grams.

(vii) **Olive-pomace oil**: Oil consisting of a blend of refined olive-pomace oil and virgin olive oils and it has a free acidity (FFA), expressed as oleic acid, of not more than 1 gram per 100 grams.

(B) The aforesaid olive oils shall conform to characteristic given in, sub clause (3)

(3) Quality characteristics:

Parameters	Virgin olive oil, extra virgin olive oil and ordinary	Refined olive oil	Olive oil	Refined olive pomace oil	Olive pomace oil

	virgin olive oil				
Moisture and volatile matter: (Max)	0.2 %	0.1 %	0.1 %	0.1 %	0.1 %
Insoluble impurities (Max)	0.1%	0.05 %	0.05 %	0.05 %	0.05 %
Trace Metals(Max) Iron (Fe) Copper(Cu)	3 mg/kg 0.1 mg/kg	3 mg/kg 0.1 mg/kg	3 mg/kg 0.1 mg/kg	3 mg/kg 0.1 mg/kg	3 mg/kg 0.1 mg/kg
Refractive Index at 20ºC.	1.4677-1.4705	1.4677-1.4705	1.4677-1.4705	1.4680-1.4707	1.4680-1.4707
Saponification value (mg KOH/g oil)	184-196	184-196	184-196	182-193	182-193
Iodine value(Wijs)	75-94	75-94	75-94	75-92	75-92
Unsaponifiable matter (Max)	15g/kg	15g/kg	15g/kg	30g/kg	30g/kg
[72][****]					
Semi-Siccative oil test	Negative	Negative	Negative	Negative	Negative
Olive pomace oil test	Negative	Negative	Negative	Positive	Positive
Cotton seed oil test	Negative	Negative	Negative	Negative	Negative
Teaseed oil test	Negative	Negative	Negative	Negative	Negative
Sesame seed oil test	Negative	Negative	Negative	Negative	Negative
Test for Argemone oil	Negative	Negative	Negative	Negative	Negative

(4) Food additives:

(i) Virgin olive oils

No additives are permitted in these products.

(ii) Refined olive oil, olive oil, refined olive-pomace oil and olive-pomace oil

The addition of alpha-tocopherols [d-*alpha* tocopherol (INS 307a)]; mixed tocopherol concentrate [(INS 307b); dl-*alpha*-tocopherol (INS 307c)] to the above products is permitted to restore natural tocopherol lost in the refining process and the concentration of alpha-tocopherol in the final product shall not exceed 200 mg/kg.

(5) Contaminants:

Heavy metals- The products covered by the provisions of this standard shall comply with maximum limits as follows:-

	Maximum permissible concentration
Lead (Pb)	0.1 mg/kg
Arsenic (As)	0.1 mg/kg

(6) Labelling: The provisions relating to labelling shall be as laid down under the Food Safety and Standards (Packaging and labelling) Regulation, 2011.]

9. **Poppy seed oil** means the oil expressed from poppy seeds (papaver somniferum). It shall be clear, free from rancidity, suspended or other foreign matter separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40°C	60.0 to 64.0
Or	
Refractive Index at 40°C	1.4659 - 1.4685
Saponification value	186 to 194
Iodine value	133 to 143
Unsaponifiable matter	Not more than 1.0 per cent
Acid value	Not more than 6.0

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices.

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

10. **Safflower seed oil (barrey ka tel)** means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40°C	62.4 to 64.7
Or	
Refractive Index at 40°C	1.4674-1.4689
Saponification value	186-196
Iodine value	135-148
Unsaponifiable matter	Not more than 1.0 per cent
Acid value	Not more than 6.0

[72][****]

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

10.1 **Imported Safflower seed oil and Safflower seed oil (High Oleic Acid – Imported or domestic**) means the oil expressed from the seeds of Carthamus tinctorious L. It shall be clear, free from rancidity, suspended or foreign matter, separated water, added colouring or flavouring substances, or mineral oil. Safflowerseed oil (High Oleic Acid) shall contain not less than 70% oleic acid as percent of total fatty acidshall conform to the following standards:—

Parameters	*High Oleic Acid Safflowerseed Oil*	*Imported Safflower seed Oil*
B.R. Reading at 40ºC	51.0-57.1	61.7-66.4
Or		
Refractive Index at 40ºC	1.460-1.464	1.467-1.470
Iodine value (wijs method)	80-100	136-148
Saponification value	186-194	186-198

Unsaponifiable matter	Not more than 10g/kg	Not more than 15g/kg
Acid Value [72][****]	Not more than 4.0 mg/KOH/g oil	Not more than 4.0 mg/KOH/g oil
Test for Argemone oil	Negative	Negative

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.00 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

11. **TARAMIRA OIL** means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40 °C	58.0 to 60.0
Or	
Refractive Index at 40°C	1.4646-1.4659
Saponification value	174 to 177
Iodine value	99 to 105
Unsaponifiable matter	Not more than 1.0 per cent
Acid value	Not more than 6.0

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

12. **TIL OIL** (Gingelly or sesame oil) means the oil expressed from clean and sounds seeds of Til (Sesamum indicum), black, brown, white, or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40 °C	58.0 to 61.0
Or	
Refractive Index at 40°C	1.4646-1.4665
Saponification value	188 to 193
Iodine value	103 to 120
Unsaponifiable matter	Not more than 1.5 per cent
Acid value	Not more than 6.0

[72][****]

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:—

Butyro-refractometer reading at 40 °C	60.5 to 65.4
Or	
Refractive Index at 40°C	1.4662-1.4694
Saponification value	185 to 190
Iodine value	115 to 120
Acid value	Not more than 6.0
Unsaponifiable matter	Not more than 2.5 per cent

[72][****]

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these regulations and Appendix A

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

13. **NIGER SEED OIL (Sargiya ka tel)** means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, mineral or other oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40 °C	61.0-65.0
Or	
Refractive Index at 40°C	1.4665-1.4691
Saponification value	188-193
Iodine value	110 to 135
Acid value	Not more than 6.0
Unsaponifiable matter	Not more than 1.0 per cent

[72][****]

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices.

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

14. **Soyabean oil** means the oil expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring substances or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40 °C	58.5 to 68.0
Or	
Refractive Index at 40°C	1.4649-1.4710
Saponification value	189 to 195
Iodine value	120 to 141
Unsaponifiable matter	Not more than 1.5 per cent
Acid value	Not more than 2.50
Phosphorus	Not more than 0.02

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices.

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

15. **Maize (corn) oil** means the oil, extracted from the germ of clean and sound seeds of zea mays linn. fam. graminiae, refined. it shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or Mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40°C	56.7 to 62.5
Or	
Refractive Index at 40°C	1.4637-1.4675
Saponification value	187 to 195
Iodine value	103 to 128
Unsaponifiable matter	Not more than 1.5 per cent
Acid value	Not more than 0.50

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

[72][16. **Refined vegetable oil**.-(1) Refined Vegetable Oil means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and/or by miscella refining using permitted food grade solvents and/or degumming using phosphoric/citric acid and /or any suitable food grade enzyme, followed by bleaching with adsorbent earth and/or activated carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards to which refined vegetable oils shall conform to, the standards prescribed in these regulations for the specified

edible oils shall also apply except for acid value which shall be not more than 0.6. Moisture shall not exceed 0.10 per cent by weight. Trans fatty acids shall not be more than 5 % by weight. Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022. Test for argemone oil shall be negative. The refined vegetable oil shall be obtained from the vegetable oils standardized in these regulations.

(2) The refined vegetable oil shall comply with the following requirements.-The oils shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil.

(3) However, it may contain food additives permitted in these Regulations and Appendices.]

17. **Almond oil** means the oil expressed from the seeds of prunus amygdalus Batach var, Dulcius Koehne (sweet almond) or of Prunus amygdalus Batach, var Amara Focke (bitter almond) without the application of heat. It shall be clear from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:—

Butyro-refractometer reading at 40 °C	54 to 57
Or	
Refractive Index at 40°C	1.4620-1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
[72][****]	
Acetic acid method	

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices

18. **Water-melon seed oil** means the oil extracted from the clean, sound seeds of the fruit of water-melon (citrullus vulgaris schrad, family: Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:—

Moisture and volatile matter	Not more than 0.25 per cent
Butyro-refractometer reading at 40 °C or Refractive Index at 40°C	55.6 - 61.7 1.4630-1.4670
Saponification value	190 - 198
Iodine value	115 - 125
Acid value	Not more than 6.0
Unsaponifiable matter	Not more than 1.5 %

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices.

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.00 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

[39][19. **Palm oil** means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guinensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:—

S. No.	Parameters	Limits
1	Butyro-refractometer reading at 50° C Or Refractive Index at 50° C	35.5 - 44.0 1.4491-1.4552
2	Melting point (capillary slip method)	[54][Not more than 39°C]
3	Iodine value(Wij's method)	45-56
4	Saponification value	195-205
5	Unsaponifiable matter	Not more than 1.2 per cent
6	Free Fatty Acid (expressed as Palmitic Acid)	Not more than 10.0 per cent

Indigenously produced raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided Free Fatty Acid value (%) (expressed as Palmitic Acid) is not more than 3.0. But palm oil imported into the country or domestically produced having Free Fatty Acid value more than 3.0 and upto 10.0 or obtained by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under regulation 2.2.1 (16). Additionally, it shall have Flash Point (Pensky-Marten closed method) – Not less than 250° C.

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these regulations and appendices.

The oil so refined shall not contain hexane more than 5.00 ppm.]

20**. Palmolein means** the liquid fraction obtained by fractionation of palm oil obtained from

the fleshy mesocarp of fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:—

Butyro-refractometer reading at 40° C Or Refractive Index at 40° C	43.7 - 52.5 1.4550 - 1.4610
Iodine value(Wij's method)	54-62
Saponification value	195-205
Cloud Point	Not more than 18°C
Unsaponifiable matter	Not more than 1.2 per cent
Acid value	Not more than 6.0

Further, if the palmolein is obtained from solvent extracted palm oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under regulation 2.2.1 (16). Additionally, it shall have Flash Point (Pensky Marten closed method) - not less than 250ºC.

Test for argemone oil shall be negative. However, it may contain food additives permitted in these Regulations and Appendices

The oil so refined shall not contain Hexane more than 5.00 ppm.

[39][21. **Palm kernel oil** means the oil obtained from sound kernel of the fruits of oil palm (Elaeis guinensis) tree by the method of expression or solvent extraction. It shall be clear and free from rancidity suspended, or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:—

S. No.	Parameters	Limits
1.	Butyro-refractometer reading at 40° C Or Refractive Index at 40° C	35.3 - 39.5 1.4490 - 1.4520
2.	Iodine value (Wij's method)	10 - 23
3.	Saponification value	237-255
4.	Unsaponifiable matter	Not more than 1.2 per cent
5.	Free Fatty Acid (expressed as Lauric Acid)	Not more than 10.0 per cent

Further, Palm kernel oil imported into the country or domestically produced having Free Fatty Acid value(%) more than 3.0 and upto 10.0 or obtained by solvent extraction shall be supplied for human

consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). Additionally, it shall have flash point (Pensky–Martens closed method) – not less than 250°C.

Test for argemone oil shall be negative.
However, it may contain food additives permitted in these regulations and appendices.
The oil so refined shall not contain hexane more than 5.00 ppm.]

22. **Sun flower seed oil** means the oil obtained from clean and sound sunflower seeds or cake from the plants Helianthus annus linn (Family:compositae) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:—

Butyro-refractometer reading at 40° C	57.1 - 65.0
Or	
Refractive Index at 40° C	1.4640 - 1.4691
Iodine value (Wij's method)	100 - 145
Saponification value	188 - 194
Unsaponifiable matter	Not more than 1.5 per cent
[72][Acid value	Not more than 6.0 and Not more than 4.0 (for imported sunflower seed oil)]

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). Additionally, it shall have Flash Point (Pensky Marten closed method) - not less than 250°C.
Test for argemone oil shall be negative.
However, it may contain food additives permitted in these Regulations and
Appendices The oil so refined shall not contain Hexane more than 5.00 ppm.

22.01 [72][Sunflower seed Oil-High Oleic acid] means the oil obtained from clean and sound Sunflowerseed or the High Oleic acid oil bearing Sunflowerseeds of Helianthus annuus L. by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall contain not less than 75% oleic acid as percent of total fatty acids. It shall conform to the following standards:—

[72][S.No.	Parameters	Limits
1.	Butyro-refractometer reading at 25°C or Refractive Index at 25°C	61.7-68.0 1.467-1.471
2.	Iodine value (Wij's method)	78-90
3.	Saponification value	182-194

4.	Unsaponifiable matter	Not more than 1.5%
5.	Acid value	Not more than 4.0
6.	Test for Argemone oil	Negative]

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.00 ppm.

Amendment for substitution of highlighted provision

[75][Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

23. Rice bran oil means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam Gramineae which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached with bleaching earth or activated carbon or both and deodorised with steam. Alternatively deacidification' bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35°C for 24 hrs. Rice Bran Oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:—

Moisture and Volatile Matter	Not more than 0.1 percent by weight
Refractive Index at 40 °C	1.4600 - 1.4700
Or	
Butyro-refractometer reading at 40 °C	51.0 - 66.4
Saponification value	180 - 195
Iodine value (Wij's method	90 - 105
Acid value	Not more than 0.5
Unsaponifiable matter, percent by weight	
(a) for chemically refined	Not more than 3.5 percent
(b) for physically refined	Not more than 4.5 percent
- Oryzanol Content	Not less than 1.0 percent
Flash Point (Pensky Marten Closed method)	Not less than 250 °C

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.00 ppm.

[72]**[24. Multi-Sourced Edible Vegetable Oils** means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these regulations.

Multi-Sourced Edible Vegetable Oils shall not contain more than 33% of saturated fatty acids.

Multi-Sourced Edible Vegetable Oils may have an ideal ratio of omega 3 and omega 6 to be in the range of 1:5 to 1:10. Third oil namely Chia oil and/or Flaxseed/Linseed Oil, upto 5 % of the total oil, may be added if the Multi-Sourced Edible Vegetable Oil is claimed to have an ideal ratio of omega 3: omega 6.

The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards].

Amendment for substitution of highlighted words

[77][Multi Source Edible Oil]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

a)	Moisture and volatile matter	Not more than 0.2 per cent by weight;
b)	Acid value:—	
	Nature of oil	**Acid Value**
	(1) Both raw edible vegetable oils in the blend	Not more than 6.0
	(2) One raw edible vegetable oil(s) and one refined vegetable oil(s) in the blend	Not more than 5.0
	(3) Both refined edible vegetable oils in the blend	[72][Not more than 0.6]

	(4) Unsaponifiable matter, percent by weight (i) Blended with chemically refined rice bran oil (ii) Blended with other edible vegetable oil [14][(iii) Blended with physically refined rice bran oil	 Not more than 3.0 percent by weight Not more than 1.50 percent by weight Not more than 4.0 percent by weight; provided that oryzanol content be minimum of 0.20 % (by weight) with rice bran oil at 20% level and with a increment of 0.05% with every 5% rise in rice bran oil content in the blend]
	Flash point (Pensky Martin closed method)	Not less then 250°C

Test for Argemone oil shall be negative
However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16).
The oil so refined shall not contain hexane more than 5.00 ppm.

[54][25**. Avocado oil** means the oil obtained from the avocado fruit (*Persea Americana*) which is clear and free from rancidity, suspended or other foreign matter, separated water and added colouring or flavouring substances and conforms to the following parameters and limits, namely: -

S.No.	**Parameters**	**Limits**
1.	Refractive index at 40°C	1.4650 – 1.4740
2.	Saponification value	177 - 198
3.	Iodine value	63 - 95
4.	Unsaponifiable matter	Not more than 12.0% by weight
5.	Acid value	Not more than 2

Note 1.-Test for Argemone oil shall be negative.

Note 2- Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16).The oil so refined shall not contain Hexane more than 5.00 ppm.

Amendment for substitution of highlighted provision

[75][Note 2- Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

Note 3-The Oil may contain food additives permitted in these regulations and appendices.

26. Palm Stearin means the high melting fraction obtained by fractionation of palm oil which is derived from the fleshy mesocarp of fruits of oil palm (*Elaeis guinensis*) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:

S.No.	Parameters	Limits
1.	Refractive index at 60°C	1.447-1.452
2.	Saponification value	193-205
3.	Iodine value	Not more than 48
4.	Unsaponifiable matter	Not more than 0.9 per cent by weight
5.	Slip point or Slip melting point	Not less than 44°C
6.	Free Fatty Acid (expressed as Palmitic Acid)	Not more than 5.0 per cent by weight

Note 1.- Test for Argemone oil shall be negative.

Note 2- Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16).The oil so refined shall not contain Hexane more than 5.00 ppm. Additionally, it shall have Flash Point (Pensky Marten closed method) - not less than 250°C.

Note 3-The Oil may contain food additives permitted in these regulations and appendices.

27. Palm Kernel Stearin means the solid fraction obtained by fractionation of palm kernel oil obtained from sound kernel of the fruits of oil palm (*Elaeis guinensis*) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign

matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

S.No.	Parameters	Limits
1.	Refractive index at 40°C	1.449-1.451
2.	Saponification value	244-255
3.	Iodine value	4-8.5
4.	Unsaponifiable matter	Not more than 1.5 per cent by weight
5.	Free Fatty Acid (expressed as Lauric Acid)	Not more than 5.0 per cent by weight
6.	Slip point or Slip melting point	31 -34 °C

Note 1.- Test for Argemone oil shall be negative.

Note 2- Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16).The oil so refined shall not contain Hexane more than 5.00 ppm. Additionally, it shall have Flash Point (Pensky Marten closed method) - not less than 250°C.

Note 3-The Oil may contain food additives permitted in these regulations and appendices.

28. Palm Kernel Olein means the liquid fraction obtained by fractionation of Palm Kernel oil obtained from sound Kernel of the fruits of oil Palm (*Elaeis guinensis*) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:

S.No.	Parameters	Limits
1.	Refractive index at 40ºC	1.451-1.453
2.	Saponification value	231-244
3.	Iodine value	20-28

4.	Unsaponifiable matter	Not more than 1.5 per cent by weight
5.	Free Fatty Acid (expressed as Lauric Acid)	Not more than 5.0 per cent by weight
6.	Slip point or Slip melting point	21 - 26 °C

Note 1.-Test for Argemone oil shall be negative.

Note 2- Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16).The oil so refined shall not contain Hexane more than 5.00 ppm. Additionally, it shall have Flash Point (Pensky Marten closed method) - not less than 250°C.

Note 3-The Oil may contain food additives permitted in these regulations and appendices.

29. Palm Superolein means the liquid fraction obtained by fractionation of Palm oil obtained from the fleshy mesocarp of fruits of oil Palm (*Elaeis guinensis*) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

S.No.	**Parameters**	**Limits**
1.	Refractive index at 40ºC	1.463-1.465
2.	Saponification value	180-205
3.	Iodine value	Not less than 60
4.	Unsaponifiable matter	Not more than 1.3 per cent by weight
5.	Free Fatty Acid (expressed as Palmitic Acid)	Not more than 3.0 per cent by weight

Note 1.-Test for Argemone oil shall be negative."

Note 2- Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.00 ppm. Additionally, it shall have Flash Point (Pensky Marten closed method) - not less than 250ºC.

Note 3-The Oil may contain food additives permitted in these regulations and appendices.]

[60][30. **Chia oil** means the oil expressed from the clean and sound seeds of chia (Salvia hispanica) without the application of heat which shall be clear from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances and mineral oil and conforms to the following parameters and limits, namely:-

S.No.	Parameters	Limits
	Refractive index at 40°C	1.470 – 1.480
	Saponification value	185-199
	Iodine value	Not less than 180
	Acid Value	Not more than 2.0mg KOH/g Oil
	Unsaponifiable matter	Not more than 1.5%

Note.- Test for Argemone oil shall be negative.]

Amendment for insertion of new provision

[75]**[31. Grapeseed oil** means the oil expressed from the clean and sound Grape seeds (*Vitisvinifera*L.) It shall be clear from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances and mineral oil. It shall conform to the following specifications, namely:-

S. No.	Parameters	Limits
1.	Refractive index at 40°C	1.467 - 1.477
2.	Saponification value	188 - 194
3.	Iodine value	128 - 150
4.	Unsaponifiable matter	Not more than 2.0 percent
5.	Acid Value	Not more than 4.0

Test for Argemone oil shall be negative."

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain hexane more than 5.0 ppm. The oil obtained by expelled pressed method shall be free from hexane residues.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

2.2.2 Interesterified [26][vegetable fat/Oil]: means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through [2][enzymatic process or] the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodourisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matter, separated water and mineral oil. It shall conform to the following standards, namely:—

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified fat unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added;

(iii) If any flavour is used, it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government:

[72][****]

(iv) It shall not have moisture exceeding 0.25 per cent;

(v) [72][It shall not contain trans fatty acids more than 5 % by weight:
Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]

(vi) [26][****]

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent;

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm. cell on a Lovibond scale;

Amendment for substitution of highlighted provision

[75][(x) It shall contain raw or refined sesame oil (Til oil) in sufficient quantity so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm. cell on a Lovibond scale.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin A per gram at the time of packing and shall show a positive test for Vitamin A when tested by Antimony Trichloride (Carr-Price) reagent (As per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Authority.

Test for argemone oil shall be negative.

However, it may contain food additives permitted in these Regulations and Appendices

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.00 ppm.

2.2.3 PARTIALLY HYDROGENATED SOYABEAN OIL

1. **Partially hydrogenated and winterised soyabean oil** means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed, deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and/or carbon, partially hydrogenerated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil, and other vegetable and animal fats.

It may contain food additives permitted in these Regulations and Appendices.

It shall conform to the following standards:

Moisture	Not more than 0.1 percent by weight
Refractive Index at 40°C	1.4630 - 1.4690
Or	
Butyro-refractometer reading at 40°C	55.6 - 64.8
Saponification value	189 - 195
Iodine value (Wij's method)	107 - 120
Acid value	Not more than 0.50
Unsaponifiable Matter	Not more than 1.5 percent by weight
Linolenic Acid (c18: 3)	Not more than 3 percent by weight
Cloud Point (°C)	Not more than 10°C
Flash Point (Pensky Marten Closed method)	Not less than 250 °C

Test for argemone oil shall be negative

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16). The oil so refined shall not contain Hexane more than 5.00 ppm.

[72][The oil shall not contain trans fatty acids more than 5 % by weight:

Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]

2. Partially hydrogenated soyabean oil means deodourised product obtained by light (mild or "brush") hydrogenation of degummed, deacidified, decolorised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and/or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidified, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal Oils & fats.

It may contain food additives permitted in these Regulations and Appendices

It shall conform to the following standards:

Moisture	Not more than 0.1 percent by weight
Refractive Index at 40^{o}C	1.4630 - 1.4670
Or	
Butyro-refractometer reading at 40^{o}C	55.6 - 61.7
Saponification value	189 - 195
Iodine value (Wij's method)	95 - 110
Acid value	Not more than 0.50
Unsaponifiable Matter	Not more than 1.5 percent by weight
Linolenic Acid (c18: 3)	Not more than 3 percent by weight
Cloud Point (°C)	Not more than 25°C
Flash Point (Pensky Marten Closed method)	Not less than 250 ^{o}C

Test for argemone oil shall be negative

Note : The edible oils prescribed under regulation 2.2.1 shall be free from Castor oil.

Further, if the oil is obtained by the method of solvent extraction and the oil imported into India whether obtained by solvent extraction or otherwise, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under regulation 2.2.1 (16).The oil so refined shall not contain Hexane more than 5.00 ppm.

[72][The oil shall not contain trans fatty acids more than 5 % by weight:

Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]

2.2.4 EDIBLE FATS:

1. **Beef fat or suet means fat** obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

   It may contain food additives permitted in these regulations and appendices

2. **Mutton fat means fat** obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an iodine value from 35 to 46.

   It may contain food additives permitted in these regulations and appendices

3. **Goat fat** means the rendered fat from goat. it shall have a saponification value varying from 193 to 196 and iodine value from 36 to 45.

   It may contain food additives permitted in these Regulations and Appendices

4. **Lard** means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. it shall have a saponification value varying from 192 to 198 and iodine value from 52 to 65.

It may contain food additives permitted in these regulations and appendices

[39][5. **Cocoa butter** means the fat produced by extraction or expression from cocoa beans, the fermented and dried seeds of *Theobroma cacao* L, or its constituent parts (except the shell), or its products, cocoa nib, cocoa fines, cocoa mass, cocoa press cake or expeller press cake. It shall be free from rancidity or other off odours, adulterants or other harmful ingredients. It shall have the colour, odour and taste characteristic of cocoa butter. If the fat is obtained by the method of solvent extraction, it shall not contain hexane more than 5ppm. It shall conform to the following standards, namely:-

S. No.	Parameters	Limits
1.	Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.75
2.	Iodine value	32 to 42
3.	Melting point	29° C to 34° C
4.	Butyro-refractometer reading at 40° C Or Refractive Index at 40° C	40.9 to 48.0 1.4530-1.4580
5.	Saponification value	188 to 200
6.	Unsaponifiable matter and in case of press cocoa butter	Not more than 0.7 per cent by weight Not more than 0.35 per cent by weight.]

6. Refined salseed fat means the fat obtained from seed kernels of sal trees, shorea robusta Gaertn, F.(N..diperrocaspaceae which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorisation may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. However, it may contain food additives permitted in these Regulations and Appendices. There shall be no turbidity after keeping the filtered sample at 40^{o}C for 24 hours. It shall conform to the following standards:—

(i)	Moisture	Not more than 0.1 percent
(ii)	Butyro refractometer reading at 40^{o}C	36.7 - 51.0
	OR	
	Refractive Index at 40^{o}C	1.4500 - 1.4600
(iii)	Iodine Value (Wijs' Method)	31 - 45

(iv)	Saponification value	180 - 195
(v)	Unsaponifiable matter	Not more than 2.5 percent by weight
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 percent by weight
	Or	
	Acid value	Not more than 0.5
(vii)	9:10 epoxy and 9:10 Dihydroxy stearic acid	Not more than 3.0 percent by weight
(viii)	Flash point (Pensky Marten closed method)	Not less than 250°C

Test for argemone oil shall be negative

7. Kokum Fat means the fat obtained from clean and sound kernels of Kokum (Garcinia indica choisy) "also known as kokum, by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediments, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil." However, it may contain food additives permitted in these regulations and Appendix A.

It shall also conform to the following standards, namely:—

(a)	Butyro-refractometer reading at 40°C, or	45.9-47.3
	Refractive Index at 40°C	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight
(d)	Iodine value (Wijs)	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250°C

Test for argemone oil shall be negative.

8. Mango Kernel Fat means the fat obtained from clean and sound kernels of Mango (Magifera Indica Linn) by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil. However, it may contain food additives permitted in these Regulations and Appendices. It shall also conform to the following standards, namely :—

(a)	Butyro-refractometer reading at 40°C, or Refractive Index at 40°C	43.7-51.6 1.4550 to 1.4604
(b)	Saponification value	185-198
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight
(d)	Iodine value (wijs)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not more than 250°C

Test for argemone oil shall be negative.

9. Dhupa Fat means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil. However, it may contain food additives permitted in these Regulations and Appendices

It shall also conform to the following standards, namely:—

(a) Butyro-refractometer reading at 40°C,	47.5-49.5
or Refractive Index at 40°C	1.4576 to 1.4590
(b) Saponification value	187-192
(c) Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d) Iodine value (wijs)	36-43
(e) Acid value	Not more than 0.5
(f) Flash Point Penske-Martens (closed) method	Not less than 250°C

Test for argemone oil shall be negative.

10. Phulwara Fat means the fat obtained from clean and sound seed kernels of Phulwara [variously named Aisandra Butyrace (Roxb) Baehni, Madhuca Butyracea or Bassia Butyracea] by a process of expression or by a process of solvent extraction from cake or Kernel. It shall be refined. The fat shall be clear on melting and shall be free from rancidity, adulterants sediments, suspended on other foreign matters, separated water, added colouring and flavouring substances and mineral oil. However, it may contain food additives permitted in these Regulations and Appendices.

It shall also conform to the following Standards, namely:—

(a)	Butyro-refractometer reading at 40°C,	48.6-51.0
	or Refractive Index at 40°C	1.4584 to 1.4600
(b)	Saponification value	192.5-199.4
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (wijs)	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Penske-Martens (closed) method	Not less than 250°C

Test for argemone oil shall be negative.

[39]**[11.** Peanut Butter means cohesive, comminuted food product prepared from clean, sound, shelled peanuts or groundnuts (*Arachis hypogaea L.*) by grinding roasted mature kernels from which the seed coats have been removed. It may contain sugar, liquid glucose and edible oils and fats permitted in these regulations.It shall conform to the following standards, namely:-

S. No.	Parameters	Limits
1.	Moisture	Not more than 3.0 per cent by weight

2.	Fat	Not less than 40.0 per cent by weight(on dry basis)
3.	Protein	Not less than 25.0 per cent by weight(on dry basis)
4.	Total ash	Not more than 5.0 per cent by weight(on dry basis)
5.	Acid value of extracted fat	Not more than 4.0
6.	Salt as NaCl	Not more than 2 per cent by weight

Test for argemone oil shall be negative.

(i) Food Additives: The product may contain food additives permitted in Appendix A.

(ii) Contaminants, Toxins and Residues: The product shall comply with the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

(iii) Hygiene: The products shall be prepared and handled in accordance with the practices prescribed in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such practices prescribed from time to time under the provisions of the Food Safety and Standard Act, 2006.
The product shall conform to the microbiological requirement prescribed in Appendix B.

(iv) Labelling: The provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply.

(v) Methods of Sampling and Analysis: As provided in the relevant Food Safety and Standards Authority of India Manual of Methods of Analysis of Food.]

[74][12. **Shea butter.**- Shea butter means the product obtained by pressing and extraction from shea kernels derived from Shea tree (*Butyrospermum parkii*). It shall be refined to make it fit for human consumption. The refined shea butter may be used as such or fractionated using dry fractionation or solvent fractionation technique to obtain stearin/olein fractions to be suitably used for different food applications.
Shea butter shall be free from admixture with other oils and fats and free from adulterants, any foreign matter or added colouring substance. It shall be clear on melting.

It shall conform to the following standards:

Serial No.	Parameters	Shea butter (Unrefined)	Shea butter (Refined)
1.	Refractive index at 44°C	1.4620 – 1.4650	1.4620 – 1.4650
2.	Iodine value	30 - 75	30 - 75
3.	Saponification value	160 - 200	160 - 200
4.	Unsaponifiable matter	Not more than 19 per cent.	Not more than 10 per cent.
5.	Free Fatty acids (as oleic acid)	Not more than 8 per cent.	Not more than 0.25 per cent
6.	Moisture	-	Not more than 0.1 per cent

7.	Flash point (Pensky-Marten closed method)	-	Not less than 250°C

Note: 1. Test for argemone oil shall be negative
2. It may contain food additive as per appendix A of these regulations.

13. Borneo tallow/ Illipe butter.- Borneo tallow/ Illipe butter means the fat obtained by pressing and extraction from Illipe seeds (*Shorea stenoptera*). Illipe butter shall be free from admixture with other oils and fats and free from adulterants, rancidity, suspended or any foreign matter, separated water, added colouring or flavouring substance, or mineral oil. It shall be clear on melting.

It shall conform to the following standards:

Serial No.	Parameters	Borneo tallow/ Illipe butter
1.	Refractive index at 40°C	1.4560 – 1.4570
2.	Iodine value	25 - 38
3.	Saponification value	180 - 200
4.	Unsaponifiable matter	Not more than 2.5 per cent.
5.	Free Fatty acids (as oleic acid)	Not more than 3 per cent.

Note: 1. Test for argemone oil shall be negative
2. It may contain food additive as per appendix A of these regulations.]

2.2.5 MARGARINE AND FAT SPREADS:

1. **Table margarine** means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, skimmed milk powder not exceeding 2 per cent; it may contain food additives permitted in these Regulations and Appendices. It shall conform to the following specifications, namely:—

Fat	Not less than 80 per cent mass/mass
Moisture	Not less than 12 per cent and not more than 16 per cent mass/ mass.
Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
Melting point of extracted fat (Capillary Slip Method)	31°C to 37°C
Unsaponifiable matter of extracted fat	Not more than 1.5 per cent by weight extracted fat.
Free fatty acids (as oleic acid) of extracted fat	Not more than 0.25 per cent by weight
OR	
Acid Value	Not more than 0.5

It shall contain not less than 5.0 percent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm cell on a lovibond scale.

Amendment for substitution of highlighted provision

[75][It shall contain raw or refined sesame oil (Til oil) in sufficient quantity so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.5 red units in a 1 cm. cell on a Lovibond scale.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

Provided that such coloured and flavoured margarine shall also contain starch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighing not more than 500gms.

Test for Argemone oil shall be negative.

[72][It shall not contain trans fatty acids more than 5 % by weight:

Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]

2. Bakery and Industrial Margarine- means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 percent. However, it may contain food additives permitted in these Regulations and Appendices. It shall conform to the following standards, namely:—

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and Not more than 16 per cent m/m.

The separated fat of the products shall conform to the following :—

(i)	Vitamin A	Not less than 30 IU per gram at the time of packaging and shall show a positive test for Vitamin 'A' when tested by Antimony trichloride (carrprice) reagents (as per IS 5886-1970).
(ii)	[72][Trans fatty acids Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]	Not more than 5 % by weight.

(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the products where proportion of Rice bran oil is more than 30 per cent by wt. the unsaponifiable matter shall be not more than 2.5 per cent by wt. provided quantity of Rice bran oil is declared on the label of such product as laid down in Regulation 2.4.5 (34) of Food Safety and Standards (Food Products Standards and Food Additive) Regulations, 2011.
(iv)	Free Fatty Acid calculated as Oleic acid or Acid value	Not more than 0.25 per cent. Not more than 0.5.

It shall contain raw or refined sesame oil (Til oil) in sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20 : 80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm. cell on a Lovibond scale.

Test for argemone oil shall be negative.

3**. Fat spread** means a product in the form of water in oil emulsion, of an aquous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these regulations.

Fat spread shall be classified into the following three groups:—

S.No	Types	Characteristics
(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable Oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated refined vegetable oils or interesterfied fat.

The fat content shall be declared on the label. In mixed fat spread, the milk fat content shall also be declared on the label alongwith the total fat content.

[72][The Vegetable fat spread and Mixed fat spread shall not contain trans fatty acids more than 5 % by weight.

Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]

The word 'butter' will not be associated while labelling the product.

It may 'contain' edible common salt not exceeding 2 per cent by weight in aqueous phase; milk solid not fat: It may contain food additives permitted in these Regulations and Appendices. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm cell on a Lovibond scale.

It shall also conform to the following standards, namely:—

I	Fat	Not more than 80 per cent and not less than 40 per cent by weight.
Ii	Moisture	Not more than 56 per cent and not less than 16 per cent by weight.
Iii	Melting point of Extracted fat (capillary slip method) in case of vegetable fat spread	Not more than 37°C
Iv	Unsaponifiable matter of extracted fat	
	(a) In case of milk fat and mixed fat spread	Not more than 1 per cent by weight
	(b) In case of vegetable fat spread	Not more than 1.5 per cent
V	Acid value of extracted fat	Not more than 0.5
Vi	The vegetable fat spread shall contain	Not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886 - 1970)".
vii	It shall contain Starch	Not less than 100 ppm and Not more than 150 ppm

It shall be compulsorily sold in sealed packages weighing not more than 500g. under Agmark certificate mark.

2.2.6 HYDROGENATED VEGETABLE OILS

1. **Vanaspati** means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form [2][or chemical or enzymatic interesterification]. It shall be prepared by hydrogenation from groundnut oil, cottonseed oil and sesame oil or mixtures thereof or any other harmless vegetable oils allowed by the government for the purpose. Refined sal seed fat, if used, shall not be more than 10 per cent of the total oil mix.

[54][Vanaspati shall be prepared from any of the edible vegetable oils whose standards have been prescribed in these regulations or from any other edible vegetable oil with prior approval of the Food Safety and Standards Authority of India. Provided that Refined Salseed fat, if used, shall not be more than 10 per cent of the total oil mix.]

It shall conform to the standards specified below:—

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added;

(iii) If any flavour is used, it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government:

[72][****]

(iv) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(v) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lighter than 2.0 red units in a 1 cm. cell on a Lovibond scale;

(vi) It may contain Food Additives permitted in these regulations and appendices.

[54][omit]

(vii) The product shall conform to the following requirements:

a) Moisture, percent by mass: Not more than 0.25

b) [72][Trans fatty acids - Not more than 5 % by weight:

Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]

c) it shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall not be more than 2.5 percent by weight provided quantity of rice bran is declared on the label of such vanaspati as laid down in regulation 2.4.2(8) of packaging and labelling regulations.

Amendment for insertion of new provision

[75][In case physically refined rice bran oil is used, the unsaponifiable matter shall not be more than 4.0 percent by weight; provided that oryzanol content be minimum of 0.20 % (by weight) with rice bran oil at 20% level and with an increment of 0.05% with every 5% rise in rice bran oil content.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

[54][d) Acid Value: Not more than 0.6]

e) Synthetic Vitamin 'A': Not less than 25.0 International units (IU) per gram at the time of packing and shall test positive when tested with Antimony Trichloride (carr-price Reagent) as per IS:5886-1970.

f) Residual Nickel: Not more than 1.5 ppm

g) Test for argemone oil shall be negative.

2. **Bakery shortening** means vanaspati meant for use as a shortening or leavening agent in the manufacture of bakery products, that is, for promoting the development of the desired cellular structure in the bakery product with an accompanying increase in its tenderness and volume; this will also confirm to the standards prescribed in regulation 2.2.6 (1) excepts that—

(a) [72][Trans fatty acids - Not more than 5 % by weight:

Provided that maximum limit of trans fatty acid shall not be more than 3% by weight, on and from 1st January, 2021 and not more than 2% by weight, on and from 1st January, 2022.]

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 per cent by volume thereof.

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

Test for argemone oil shall be negative.

[43][2.2.7 FATTY ACID COMPOSITION:

The oils and fats covered under this regulation shall comply with the fatty acid composition of the oils and fats specified in the table, namely:—

TABLE

Fatty acid composition of vegetable oils as determined by gas liquid chromatography (expressed as percentage of total fatty acids)

Fatty acid	Ground nut oil	Coco nut oil	Cotton-seed oil	Maize oil	Palm oil	Palm kernel oil	Palmolein	Rice bran oil	Safflower seed oil	Safflowerseed oil (high oleic acid)	Soya bean oil
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
C6:0	ND	ND-1.0	ND	ND	ND	ND-2.5	ND	ND	ND	ND	ND
C8:0	ND	4.0-10.0	ND	ND	ND	2.0-6.3	ND	ND	ND	ND	ND
C10:0	ND	5.0-10.0	ND	ND	ND	2.7-7.0	ND	ND	ND	ND	ND
C12:0	ND-1.0	44.0-53.2	ND-0.2	ND-0.3	ND-1.5	39.7-55.0	0.1-0.5	ND-0.2	ND	ND-0.2	ND-0.1
C14:0	ND-0.5	13.0-21.9	0.6-1.0	ND-0.3	0.5-2.0	11.5-19.0	0.5-1.5	ND-1.0	ND-0.2	ND-0.2	ND-0.2

C16:0	6.0-14	7.5-11.0	21.4-26.4	8.6-16.5	32.0-47.5	6.0-14.0	38.0-43.5	14-23	5.3-8.0	3.6-6.0	8-13.5
C16:1	ND-0.2	ND	ND-1.2	ND-0.5	ND-0.6	ND-0.1	ND-0.6	ND-0.5	ND-0.2	ND-0.2	ND-0.2
C17:0	ND-0.1	ND	ND-0.1	ND-0.1	ND-0.2	-	ND-0.2	ND	ND-0.1	ND-0.1	ND-0.1
C17:1	ND-0.1	ND	ND-0.1	ND-0.1	ND	-	ND-0.1	ND	ND-0.1	ND-0.1	ND-0.1
C18:0	0.6-7.0	1.0-4.9	2.1-3.4	ND-3.3	3.5-6.0	1.0-4.0	3.5-5.4	0.9-5.2	1.9-2.9	1.5-2.4	2-5.4
C18:1	35.0-69	5.0-10.0	14.7-23.5	20.0-42.2	36.0-44.0	10.5-24.6	39.8-47.0	38-48	8.4-21.3	70.0-83.7	17-30
C18:2	12.0-43.0	1.0-2.5	46.7-58.2	34.0-65.6	8.5-12	0.5-4.3	10.0-13.5	21.0-42.0	67.8-83.2	9.0-19.9	48.0-59.0
C18:3	ND-0.3	ND-0.2	ND-0.4	ND-2.0	ND-0.5	ND-0.3	ND-0.6	0.1-2.9	ND-0.1	ND-1.2	4.5-11
C20:0	1.0-4.0	ND-0.2	0.2-0.5	0.3-1.0	ND-1.0	ND-0.5	ND-0.9	ND-0.9	0.2-0.4	0.3-0.6	0.1-0.6
C20:1	0.7-1.7	ND-0.2	ND-0.1	0.2-0.6	ND-0.4	ND-0.2	ND-0.4	ND-1.1	0.1-0.3	0.1-0.5	ND-0.5
C20:2	ND	ND	ND-0.1	ND-0.1	ND	ND	ND	-	ND	ND	ND-0.1
C22:0	1.5-4.5	ND	ND-0.6	ND-0.5	ND-0.2	-	ND-0.2	ND-1.0	ND-1.0	ND-0.4	ND-0.7
C22:1	ND-0.3	ND	ND-0.3	ND-0.3	ND	ND	ND	ND	ND-1.8	ND-0.3	ND-0.3
C22:2	ND	ND	ND-0.1	ND	ND	ND	ND	ND	ND	ND	ND
C24:0	0.5-2.5	ND	ND-0.1	ND-0.5	ND	-	ND	ND-0.9	ND-0.2	ND-0.3	ND-0.5
C24:1	ND-0.3	ND	ND	ND	ND	ND	ND	ND	ND-0.2	ND-0.3	ND

ND - non detectable, defined as ≤0.05%]

Fatty acid	Mustard-seed oil	Rapeseed oil	Rapeseed oil (low erucic acid)	Sesame seed oil	Sunflower seed oil	Sunflower seed oil (high oleic acid)	Virgin olive oils	Olive oil (Refined olive oil)	Olive Pomace oil (Refined Olive Pomace oil)
(1)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
C6:0	ND	ND	ND	ND	ND	ND	-	-	-
C8:0	ND	ND	ND	ND	ND	ND	-	-	-
C10:0	ND	ND	ND	ND	ND	ND	-	-	-
C12:0	ND	ND	ND	ND-1.5	ND-0.3	ND	-	-	-

C14:0	ND-1.0	ND-0.2	ND-0.2	ND-0.8	ND-0.3	ND-0.1	0-0.1	0-0.1	0-0.1
C16:0	0.5-5.0	1.5-6.0	2.5-7.0	7.9-14.6	4.0-8.0	2.6-5.0	7.5-20.0	7.5-20.0	7.5-20.0
C16:1	ND-0.5	ND-3.0	ND-0.6	ND-0.2	ND-0.3	ND-0.1	0.3-3.5	0.3-3.5	0.3-3.5
C17:0	ND	ND-0.1	ND-0.3	ND-0.2	ND-0.2	ND-0.1	0-0.03	0-0.03	0-0.03
C17:1	ND	ND-0.1	ND-0.3	ND-0.1	ND-0.1	ND-0.1	0-0.3	0-0.3	0-0.3
C18:0	0.5-2.0	0.5-3.1	0.8-3.0	2.0-8.0	1.0-7.0	2.9-6.2	0.5-5.0	0.5-5.0	0.5-5.0
C18:1	8.0-23.0	8.0-60.0	51.0-70.0	34.4-48.0	14.0-39.4	75-90.7	55.0-83.0	55.0-83.0	55.0-83.0
C18:2	10.0-24.0	11.0-23.0	15.0-30.0	28-47.9	48.3-74.0	2.1-17	2.5-21.0	2.5-21.0	2.5-21.0
C18:3	6.0-18.0	5.0-13.0	5.0-14.0	ND-1.0	ND-0.3	ND-0.3	-	-	-
C20:0	ND-1.5	ND-3.0	0.2-1.2	0.1-0.8	0.1-0.5	0.2-0.5	0-0.8	0-0.8	0-0.8
C20:1	5.0-13.0	3.0-15.0	0.1-4.3	ND-0.5	ND-0.3	0.1-0.5	0-0.4	0-0.4	0-0.4
C20:2	ND-1.0	ND-1.0	ND-0.1	ND	ND	ND	-	-	-
C22:0	0.2-2.5	ND-2.0	ND-0.6	ND-1.1	0.3-1.5	0.5-1.6	0-0.3	0-0.3	0-0.3
C22:1	40.0-58.0	> 2.0-60.0	ND-2.0	ND	ND-0.3	ND-0.3	-	-	-
C22:2	ND-1.0	ND-2.0	ND-0.1	ND	ND	ND	-	-	-
C24:0	ND-0.8	ND-2.0	ND-0.3	ND-0.5	ND-0.3	ND-0.5	0-1.0	0-1.0	0-1.0
C24:1	0.5-2.5	ND-3.0	ND-0.4	ND	ND-0.5	ND	-	-	-

[54][Fatty acid	Avocado Oil	Palm Stearin	Palm Kernel Stearin	Palm Kernel Olein	Palm superlolein
(1)	(22)	(23)	(24)	(25)	(26)
C6:0	ND	ND	0.2 max.	0.7 max.	ND
C8:0	ND	ND	1.3-3.0	2.9-6.3	ND
C10:0	ND	ND	2.4-3.3	2.7-4.5	ND
C12:0	ND	0.1-0.5	52.0-59.7	39.7-47.0	0.1-0.5
C14:0	0.3 max.	1.0-2.0	20.0-25.0	11.5-15.5	0.5-1.5
C16:0	7.0-35.0	48.0-74.0	6.7-10.0	6.2-10.6	30.0-39.0
C16:1	2.0-16.8	0.2 max.	ND	0.1 max.	0.5 max.
C17:0	0.3 max.	0.2 max.	ND	ND	0.1 max.

C17:1	0.3 max.	0.1 max.	ND	ND	ND
C18:0	1.5 max.	3.9-6.0	1.0-3.0	1.7-3.0	2.8-4.5
C18:1	36.0-80.0	15.5-36.0	4.1-8.0	14.4-24.6	43.0-49.5
C18:2	6.0-21.2	3.0-10.0	0.5-1.5	2.4-4.3	10.5-15.0
C18:3	3.0 max.	0.5 max.	0.1 max.	0.3 max.	0.2-1.0
C20:0	0.5 max.	1.0 max.	0.5 max.	0.5 max.	0.4 max.
C20:1	0.2 max.	0.4 max.	0.1 max.	0.2 max.	0.2 max.
C20:2	ND	ND	ND	ND	ND
C22:0	ND	0.2 max.	ND	ND	0.2 max.
C22:1	ND	ND	ND	ND	ND
C22:2	ND	ND	ND	ND	ND
C24:0	0.1 max.	ND	ND	ND	ND
C24:1	ND	ND	ND	ND	ND

[60][Fatty acid	Chia Oil
(1)	(27)
C6:0	-
C8:0	-
C10:0	-
C12:0	-
C14:0	0.1 max
C16:0	6.0 – 8.0
C16:1	0.5 max
C17:0	-
C17:1	-
C18:0	3.0 - 4.5
C18:1	6.0 -9.0
C18:2	17.0 – 22.0
C18:3	58.0 – 65.0
C20:0	0.5 max
C20:1	-
C20:2	-
C22:0	0.2 max
C22:1	-
C22:2	-
C24:0	-
C24:1	-]

Amendment for insertion of new provision

[75][Fatty acid	Grapeseed Oil
(1)	(28)
C6:0	-

C8:0	-
C10:0	-
C12:0	-
C14:0	0.3 max
C16:0	5.5-11.0
C16:1	1.2 max
C17:0	0.2 max
C17:1	0.1 max
C18:0	3.0 – 6.5
C18:1	12.0-28.0
C18:2	58.0-78.0
C18:3	1.0 max
C20:0	1.0 max
C20:1	0.3 max
C20:2	-
C22:0	0.5 max
C22:1	0.3 max
C22:2	-
C24:0	0.4 max
C24:1	-]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

Note 1.- ND-not detectable, defined as ≤0.05%]

[54][**2.2.8. PEROXIDE VALUE OF OILS AND FATS**

The Peroxide Value of various categories of oils and fats shall be as follows, namely:-

(i) Refined oils up to 10 milliequivalents of active oxygen/kg oil (except olive oil);

(ii) Cold pressed and virgin oils up to 15 milliequivalents of active oxygen/kg oil (except olive oil);

(iii) Cold pressed fats and oils up to 15 milliequivalents of active oxygen/kg oil (except olive oil);

(iv) Virgin olive oils < 20 milliequivalents of active oxygen/kg oil;

(v) Refined olive oil < 5 milliequivalents of active oxygen/kg oil;

(vi) Olive oil < 15 milliequivalents of active oxygen/kg oil;

(vii) Refined olive-pomace oil < 5 milliequivalents of active oxygen/kg oil;

(viii) Olive-pomace oil < 15 milliequivalents of active oxygen/kg oil;

(ix) Other expelled edible oils and fats up to 10 milliequivalents of active oxygen/kg oil or fat.]

2.3: FRUIT & VEGETABLE PRODUCTS

2.3.1: Thermally Processed Fruits

1. Thermally Processed Fruits

(Canned/Bottled/Flexible packaged/Aseptically packed) means the products obtained from sound, matured, dehydrated, fresh or frozen, peeled or un-peeled, previously packed, whole, halves or cut pieces of fruits packed with any suitable packing medium and processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage. [72][Cherries may contain stems and shall be labelled accordingly.] It may contain water, fruit juice, dry or liquid nutritive sweeteners, spices and condiments and any other ingredients suitable to the product. The packing medium alongwith its strength shall be declared on the label.

2. The product may contain food additives permitted in these Regulations and Appendices. The product shall conform to the microbiological requirements given in Appendix B. Drained weight of fruits shall be not less than the weight given below:-

(i) Liquid pack	Not less than 50.0 percent of net weight of the contents
(ii) Solid Pack	Not less than 70.0 percent of net weight of the contents

[72][In case of cherries with stems, drained weight of the cherries shall be calculated after removal of the stems from the cherries.]

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

[56]**[2.3.2: Thermally Processed Fruit Salad/Cocktail/Mix**

1. **Description.-**Thermally Processed fruit salad/Cocktail/Mix (Canned, Bottled, Flexible pack and/ or Aseptically Packed) means the product,-

(a) prepared from mixture of fruits;

(b) such fruits may be fresh, frozen or canned;

(c) the fruit mixture is packed with water or other suitable liquid packing medium and may be packed with nutritive sweeteners and processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

2. Quality factors.-

(A) Packing Media.-

(i) The product may be packed in any one of the following packing media, namely:-

a) **Water—** in which water is the sole packing medium;

b) **Water and Fruit Juice—** in which water and fruit juice(s) from the fruits used in the product are the liquid packing medium;

c) **Fruit Juice—** in which one or more fruit juice(s) from the fruits used in the product which may be strained or filtered are the liquid packing medium;

d) **With Sugar(s) —** any of the above packing media, may have one or more of the following sugars added, namely, sucrose, invert sugar syrup, dextrose, dried glucose syrup, glucose syrup, fructose and fructose syrup.

(ii) Classification of packing media when sugars are added.-

(a) When sugars are added to fruit juice(s), the liquid media shall be not less than 10° Brix, and they are classified on the basis of the cut out strength as follows:

1.	Extra light sweetened: (name(s) of fruit) Juice	Not less than 10° Brix and not more than 13.9° Brix;
2.	Lightly sweetened: (name(s) of fruit) Juice	Not less than 14° and not more than 17.9° Brix;
3.	Heavily sweetened: (name(s) of fruit) Juice	Not less than 18° and not more than 21.9° Brix;
4.	Extra heavy sweetened(name(s) of fruit) Juice	Not less than 22° Brix

(b) When sugars are added to water or water and one or more fruit juices the liquid media shall be classified on the basis of the cut-out strength as follows:

1.	Slightly Sweetened Water/ Extra Light Syrup	Not less than 10° Brix and not more than 13.9° Brix;
2.	Light Syrup	Not less than 14° Brix and not more than 17.9° Brix
3.	Heavy Syrup	Not less than 18° Brix and not more than 21.9° Brix;
4.	Extra Heavy Syrup	Not less than 22° Brix.

(B**) Quality Criteria.-**

(i)Colour.-Canned Tropical Fruit Salad shall have a colour characteristic of the mixed processed fruit;

(ii)Flavour.-Canned Tropical Fruit Salad shall have normal flavour and odour characteristic for the particular blend of fruit;

(iii)Texture.- The texture of the fruit ingredient shall be appropriate for the respective fruit;

(iv)Defects and Limits.-Canned Tropical Fruit Salad shall conform to the following limits:

S.No	Defects	Limits
1.	Blemished fruit pieces (consisting of pieces of fruit with dark surface areas, spots penetrating the fruit, and other abnormalities)	2 pieces/100 g of drained fruit

2.	Peel (based on averages) (considered a defect only when occurring on, or from those fruits which are peeled)	6.5 cm^2/500 g of total contents
3.	Seed Material and Extraneous Vegetative Matter	2 g/500 g of total contents

(v) **Minimum Fill.-**The container shall be well filled with fruit and the product (including packing medium) shall occupy not less than ninety per cent. 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;

(vi) **Minimum Drained Weight.-** The drained weight of the product shall not be less than fifty percent. of the weight of distilled water at 20°C which the sealed container will hold when completely filled.

3. Labelling.-

(a) For labelling of the product, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply.

(b) In addition, the following shall be declared as part of the name or in close proximity thereto, as:

(i) When the packing medium is composed of water, or water and one or more fruit juices in which water predominates—

"In water" or "Packed in water".

(ii)When the packing medium contains water and one or more fruit juice(s), in which the fruit juice comprises fifty percent. 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—

"(name of fruits) juice(s) and water"

(iii)When the packing medium is composed solely of a single fruit juice—

"In (name of fruit) juice"

(iv)When the packing medium is composed of two or more fruit juices—

"In (name of fruits) juice"

(v)When sugars are added to one or more fruit juices, it shall be mentioned as —

“Extra light sweetened: (name(s) of fruit) Juice”

or

“Lightly sweetened: (name(s) of fruit) Juice”

or

“Heavily sweetened: (name(s) of fruit) Juice”

or

"Extra heavy sweetened (name(s) of fruit)Juice"

(vi)When sugars are added to water, or water and one or more fruit juices, it shall be mentioned as —

"Slightly Sweetened Water/ Extra Light Syrup"

or

"Light Syrup"

or

"Heavy Syrup"

or

"Extra Heavy Syrup"]

2.3.3: Thermally Processed Vegetables

1. Thermally Processed Vegetables (Canned, Bottled/Flexible pack / Aseptically Packed) means the product obtained from fresh, dehydrated or frozen vegetables either singly or in combination with other vegetables, peeled or un-peeled, with or without the addition of water, common salt and nutritive sweeteners, spices and condiments or any other ingredients suitable to the product, packed with any suitable packing medium appropriate to the product processed by heat, in an appropriate manner, before or after being sealed in a container so as to prevent spoilage. The packing medium alongwith its strength shall be declared on the label. The product may be prepared in any suitable style appropriate to the product. The product may contain food additives permitted in these Regulations and Appendices. The product shall conform to the microbiological requirements given in Appendix B. The name of the vegetables used in the product and prepared in any style shall be declared on the label alongwith the range of percentage of each vegetable used in the product. Drained weight of vegetables shall be not less than the weight given below: —

(i) Liquid Pack

(a) Mushroom	50.0 percent of net weight of contents
(b) Green beans, carrots, peas, sweet corn/ baby corn	50.0 percent of net weight of contents
(c) Mushroon Packed in sauce	25.0 percent of net weight of contents

Amendment for substitution of highlighted provision

[77][(c) Edible fungi/vegetables including baked beans packed in sauce	25.0 percent of net weight of contents.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

(d) Other Vegetables	50.0 percent of net weight of contents

(ii) Solid Pack 70.0 percent of net weight of contents

2. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the

container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

[41][2.3.3A. CANNED TOMATOES:

1. Canned tomatoes shall be prepared from selected, fresh, washed, cleaned, firm and ripe tomatoes of variety *Lycopersicum esculentum* Mill, uniform shape and free from blemish, extraneous matter, artificial colouring matter and flavouring agents, but may contain natural spices and condiments, spice oils, aromatic herbs and their extracts, natural aromas, seasoning and salt (sodium chloride) and where acidifying agents are used, sugars as prescribed in these regulations may be added.

2. Tomatoes used for the purpose of canning shall be of the following styles, namely:-

(1) Peeled tomatoes which are scalded, peeled and canned as whole or non-whole; and

(2) Unpeeled- tomatoes packed as whole or non-whole without prior scalding and peeling.

3. The style shall be specified according to the type of grinding or cutting for non-whole tomatoes, namely:-

(1) Diced: tomato cut into cubes;

(2) Sliced: tomato cut perpendicularly to the longitudinal axis in rounds with a regular thickness;

(3) Wedges: tomato cut into roughly equal parts;

(4) Pulp or crushed or chopped: tomato crushed, ground or pulped when appropriate.

4. Any of the following pack may be used, namely: —

(1) regular pack with a liquid medium added;

(2) solid pack without any added liquid.

5. Where canned tomatoes are packed in such media as tomato juice, water or tomato puree, the media shall conform to the following requirements, namely:-

(1) the quantity of added common salt shall not exceed 3 per cent. of the net;

Note.- 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 weight content.

(2) where calcium chloride is added as a firming agent, the total calcium-ion content must not exceed 0·045 per cent. in whole style and 0·080 per cent. in non-whole style;

(3) the pH of the covering liquid shall be not higher than 4·5.

6. Canned tomatoes on opening shall display the following characteristics, namely:-

(1) 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;

Note.- Uneven distribution of pigment and changes in colour normally associated with proper processing shall not be considered as defects.

(2) the product shall possess a good texture which means that it is just firm but not hard or unduly soft and have characteristic of tomato of proper stage of maturity and practically be uniform in size;

(3) Tomatoes shall be free from off odours and their colour shall be characteristic of the variety used and proper processing;

(4) the product shall be practically free from defects, the peeled product shall be virtually free from peel and in unpeeled product, the peel should be virtually intact.

7. The product shall not exceed the following tolerances given for 1 kg net weight to comply with the requirements, namely:-

(1) Blemishes: 3·5 cm^2 aggregate area;

(2) Presence of peel (peeled tomatoes)

- whole style: 30 cm^2 aggregate area;

- Non-whole: 125 cm^2 aggregate area;

(3) Absence of peel (unpeeled tomatoes)

- Whole style: 30 cm^2 aggregate area;

- Non-whole:125 cm^2 aggregate area.

8. The product shall also conform to the requirements specified in table below, namely:-

Table

S.No.	Characteristic	Requirement
(1)	(2)	(3)
1.	Vacuum in the can, in mm,(Minimum)	Negative
2.	Head space in the can in mm, (Maximum)	7
3.	Drained weight of the content of the	56

	can as percentage of the net weight,(Minimum)	

9. Containers shall be well filled with the product which shall occupy not less than 90 per cent. of the water capacity of the container.

Note 1.- The water capacity of the container is the volume of distilled water at 27^{o}C which the sealed container will hold when completely filled.

Note 2.-When the product is packed in glass containers, the water capacity shall be reduced by 20 ml.

Explanation:- for the purpose of this sub-regulation,-

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

(b) "non-whole, peeled tomatoes" means 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.

(c) "whole, unpeeled tomatoes" means unpeeled tomatoes of suitable varieties having undergone a heat treatment, packed in hermetically sealed containers with or without added water or tomato juice.

(d) "non-whole, unpeeled tomatoes" means 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.

(e) "head space" means the distance between the top of the double seam and the level of the surface of the contents.

(f) "absence of defects" means 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.

(g) "blemished Units" means 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.]

2.3.4: Thermally Processed Curried Vegetables / Ready to Eat Vegetables

1. Thermally Processed Curried Vegetables / Ready to Eat Vegetables means the product prepared from fresh, dehydrated or frozen or previously processed vegetables, legumes, cereals or pulses, whether whole or cut into pieces. The vegetable(s), either singly or in combination, may be prepared in any suitable style applicable for the respective vegetable in normal culinary preparation. It may contain salt, nutritive sweeteners, spices and condiments, edible vegetable oils and fats, milk

fat and any other ingredients suitable to the product and processed by heat, in an appropriate manner, before or after being- in a container, so as to prevent spoilage.

2. The product may contain food additives permitted in these Regulations and Appendices. The product shall conform to the microbiological requirements given in Appendix B.

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.5: Thermally Processed Vegetable soups

1. Thermally Processed Vegetable Soups (Canned, Bottled, flexible pack And/ Or Aseptically Packed) means unfermented but fermentable product, intended for direct consumption, prepared from juice/ pulp/puree of sound, mature vegetables, fresh, dehydrated, frozen or previously processed, singly or in combination, by blending with salt, nutritive sweeteners, spices and condiments and any other ingredients suitable to the product, cooked to a suitable consistency and processed by heat in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage. It may be clear, turbid or cloudy.

2. The product shall have total soluble solids (m/m) not less than 5.0 percent except for tomato soup where it shall be not less than 7.0 percent (w/ w).

3. The product may contain food additives permitted in these Regulations and Appendices. The product shall conform to the microbiological requirements given in Appendix B.

4. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

[72][2.3.6: FRUIT JUICES

(1) For the purpose of this clause,-

a) Thermally Processed Fruits Juices (Canned, Bottled, Flexible and/or Aseptically Packed) means unfermented but fermentable product, pulpy, turbid or clear, intended for direct consumption obtained by a mechanical process or suitable means from sound, ripe fruit or the flesh thereof and processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage. Some juices may be processed with pips, seeds and peel, which are not usually incorporated in the juice, but some parts or components of pips, seeds and peel which cannot be removed by good manufacturing practices (GMP) will be acceptable. The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice.

b) Non-Thermally Processed or Cold-pressed Fruit Juices means unfermented but fermentable product, pulpy, turbid or clear, intended for direct consumption

obtained directly by mechanical extraction processes, from the edible parts of sound, ripe and fresh fruit. It may undergo non-thermal processing, in an appropriate manner. No external heat shall be applied during the process."

(2) Product shall maintain the essential physical, chemical, organoleptic and nutritional characteristics of the fruit from which it comes. It may contain salt, spices, herbs and condiments and their extracts and nutrients (vitamins, minerals) which are prescribed under these regulations. One or more of the nutritive sweeteners may be added in amounts not exceeding 50 g/kg but not exceeding 200g/kg in very acidic fruits except in case of Apple Juice, Orange Juice (reconstituted from concentrate), Grape Juice, Pineapple Juice (reconstituted from concentrate).

(3) The product shall have the characteristic colour, aroma and flavour of the fruit from which it has been prepared taking into consideration the addition of permitted ingredients.

(4) The product shall meet the following requirements, namely:—

Table

S.No.	Name of the Fruit	Botanical name	Total Soluble Solids in °Brix (Min)	Acidity expressed as Citric Acid Max.(%)
(1)	*(2)*	*(3)*	*(4)*	*(5)*
1	Cashewapple	*Anacardiumoccidentale L.*	11.5	3.5
2	Pineapple	*Ananascomosus (L.) Merrill Ananassativis L. Schult. f.*	10.0	3.5
3	Soursop	*Annonamuricata L.*	14.5	3.5
4	Sugar Apple	*Annonasquamosa L*	14.5	3.5
5	Carambola / Starfruit	*Averrhoacarambola L.*	7.5	3.5
6	Water Melon	*Citrulluslanatus (Thunb.)* Matsum. &Nakai var. Lanatus	7.0	3.5
7	Lime	*Citrus aurantifolia*(Christm.) (swingle)	7.0	3.5 (Min)

8	Lemon	*Citrus limon*(L.) Burm. *f. Citrus limonum*Rissa	6.0	5.0(Min)
9	Grape fruit	*Citrus paradisi*Macfad	8.0	3.5
10	Sweetie grapefruit	*Citrus paradisi, Citrus grandis*	7.5	3.5
11	Mandarine/ Tangerine /Orange	*Citrus reticulata*Blanca	10.0	1.2
12	Sweet Orange	*Citrus sinensis (L.)*	10.0	1.1
13	Coconut*	*Cocosnucifera L.*	4.5	3.5
14	Melon	*Cucumismelo L.*	4.5	3.5
15	Casaba Melon	*Cucumismelo*L subsp. *melo*var. *inodorus*H. Jacq.	7.5	3.5
16	Honeydew Melon	*Cucumismelo*L. subsp. *melo*var. *inodorus*H. Jacq	10.0	3.5
17	Quince	*Cydonniaoblonga*Mill.	11.2	3.5
18	Crowberry	*Empetrumnigrum L.*	6.0	3.5
19	Suriname Cherry	*Eugenia uniflora*Rich.	6.0	3.5
20	Fig	*Ficuscarica L.*	18.0	3.5
21	Strawberry	*Fragaria x. ananassa*Duchense*(Fragariachiloensis*Duchesne*x Fragariavirginiana*Duchesne)	7.5	3.5
22	Genipap	*Genipaamericana*	17.0	3.5
23	Buckthorn berry or Sallow-thornberry	*Hipppohaerhamnoides L.*	6.0	3.5
24	Litchi/Lychee	*Litchi chinensis*Sonn.	11.2	3.5
25	Acerola (West Indian Cherry)	*Malpighia sp.* (Moc. &Sesse)	6.5	3.5
26	Apple	*Malusdomestica*Borkh.	10.0	3.5 (as malic acid)
27	Crab Apple	*Malusprunifolia*(Willd.) Borkh. *Malussylvestris*Mill.	15.4	3.5
28	Mango	*Mangiferaindica L*	13.5	3.5

29	Passion Fruit	*Pasifloraedulis Sims. f. edulusPassifloraedulis Sims. f. Flavicarpa O. Def.*	12.0	3.5
30	Date	*Phoenix dactylifera L.*	18.5	3.5
31	Apricot	*Prunusarmeniaca L.*	10.0	3.5
32	Sweet Cherry	*Prunusavium L.*	20.0	3.5
33	Sour Cherry	*Prunuscerasus L.*	14.0	3.5
34	Stonesbaer	*Prunuscerasus*L. cv. Stevnsbaer	17.0	3.5
35	Plum / Quetsche	*Prunusdomestica*L. subsp. *domestica*	10.0	3.5
36	Prune	*Prunusdomestica*L. subsp. *domestica*	18.5	3.5
37	Nectarine	*Prunuspersica*(L.) Batsch var. *nucipersica*(Suckow) c. K. Schneid.	10.5	3.5
38	Peach	*Prunuspersica*(L.) Batsch var. *persica, Prunus communis*	10.0	3.5
39	Sloe	*Prunusspinosa L.*	6.0	3.5
40	Guava	*Psidiumguajava L.*	8.5	3.5
41	Pomegranate	*Punicagranatum L.*	12.0	3.5
42	Pear	*Pyruscommunis L.*	10.0	3.5
43	Black Currant	*Ribesnigrum L.*	11.0	3.5
44	Red Currant /White Currant	*Ribesrubrum L.*	10.0	3.5
45	Goosberry	*Ribesuva-crispa*L.	7.5	3.5
46	Rosehip	*Rosa sp. L.*	9.0	3.5
47	Cloudberry	*Rubuschamaemorus L.*	9.0	3.5
48	Blackberry	*Rubusfruitcosus L.*	9.0	3.5
49	Dewberry	*Rubushispidus*(of North America) *R. caesius*(of Europe)	10.0	3.5
50	Red Raspberry	*Rubusidaeus*L. *Rubusstrigosus*Michx.	8.0	3.5

51	Loganberry	*Rubusloganobaccus*L. H. Bailey	10.5	3.5
52	Black Raspberry	*Rubusoccidentalis L.*	11.1	3.5
53	Boysenberry	*Rubursinus*Cham. &Schltdl.	10.0	3.5
54	Youngberry	*Rubusvitifolius x Rubusidaeus Rubusbaileyanis*	10.0	3.5
55	Elderberry	*Sambucusnigra*L. *Sambucuscanadensis.*	10.5	3.5
56	Rowanberry	*Sorbusaucuparia L.*	11.0	3.5
57	Cajá	*Spondialutea L.*	10.0	3.5
58	Umbu	*Spondiastuberosa*Arruda ex *Kost.*	9.0	3.5
59	Tamarind (Indian date)	*Tamarindusindica*	13.0	3.5
60	Cocoa pulp	*Theobroma cacao L.*	14.0	3.5
61	Cupuaçu	*Theobromagrandiflorum L.*	9.0	3.5
62	Cranberry	*Vacciniummacrocarpon*Aiton & *Vacciniumoxycoccos*L.	7.5	3.5
63	Bilberry/Blueberry	*Vacciniummyrtillus*L. *Vacciniumcorymbosum*L. *Vacciniumangustifolium*	10.0	3.5
64	Lingonberry	*Vacciniumvitis-idaea*L.	10.0	3.5
65	Grape	*Vacciniumvitis-idaea*L. Vitis*Vinifera*L. or *hybrids thereof* Vitis*Labrusca*or*hybrids thereof*	16.0	3.5
66	Tomato**	*Solanumlycopersicum*L.	5.0	3.5
67	Sapota	*Manilkara zapota*	16.0	0.5
68	Jamun	*Syzygiumcumini*	9.0	3.5
69	Banana	*Musa acuminata, Musa balbisiana and Musa × paradisiaca*	19.0	1.5

70	Other fruit juices		10.0	3.5
71	Juice of two or more fruits		10.0	3.5
[73][72	Monk Fruit	*Siraitia grosvenorii*	14.0	0.013]

Note: **This product is "coconut water" which is obtained from the tender coconut without expressing the coconut meat.*

*** For Non thermally processed/Cold pressed/Fresh tomato juice only.*

(5)The container shall be well filled with the product and shall occupy not less than 90 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20°C which the sealed container is capable of holding when completely filled.

(6)The product may contain food additives permitted in Appendix A.

(7)The product shall conform to the microbiological requirement given in Appendix B.

(8) The products covered by this Standard shall be labelled in accordance with the Food Safety and Standards (Labelling and Display) Regulations, 2020. In addition, in the ingredient list, the word "reconstituted" shall be mentioned against the name of the juice, which is reconstituted from the concentrate. The product shall be labelled as Sweetened juice if the added nutritive sweeteners are in excess of 15 gm/kg.]

[72][2.3.7 VEGETABLE JUICES

(1) For the purpose of this clause,-

(a) Thermally Processed Vegetable Juices(Canned, Bottled, Flexible Pack and/or Aseptically Packed) means the unfermented but fermentable product intended for direct consumption obtained from the edible part of vegetables including roots, tubers, stems, shoots, leaves, flowers, legumes singly or in combination. The product may be clear, turbid or pulpy, may have been concentrated & reconstituted with water suitable for the purpose of maintaining the essential composition & quality factors of the juice and processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage;

(b) Non-Thermally Processed/Cold-pressed/ Fresh Vegetable Juices means the unfermented but fermentable product intended for direct consumption obtained from

the edible part of vegetables, including roots, tubers, stems, shoots, leaves, flowers and legumes singly or in combination. The product may be clear, turbid or pulpy. It shall be obtained directly expressed by mechanical extraction processes, packed in suitable packaging material and may undergo non-thermal processing in an appropriate manner.No external heat shall be applied during the process.

(2) The product may contain edible salt, spices and condiments and their extracts, vinegar, nutritive sweeteners and nutrients (e.g. vitamins, minerals) which are prescribed under these regulations.

(3) Whey or lactoserum having undergone lactic acid fermentation may also be added not more than 100 ml/litre.

(4) The product shall have the characteristic colour, aroma and flavour of the vegetables from which it has been prepared taking into consideration the addition of ingredients.

(5) The container shall be well filled with the product and shall occupy not less than 90 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

(6)The product may contain food additives permitted in Appendix A.

(7)The product shall conform to the microbiological requirement given in Appendix B.

(8)The products covered by this Standard shall be labelled in accordance with the Food Safety and Standards (Labelling and Display) Regulations, 2020. In addition, in the ingredient list, the word "reconstituted" shall be mentioned against the name of the juice, which is reconstituted from the concentrate. "Vegetable juice with added lactic acid fermented whey/lactoserum" shall be mentioned when whey or lactoserum is added.]

[41] [**2.3.8 THERMALLY PROCESSED TOMATO JUICE:**

1. Thermally processed tomato juice means the unfermented juice obtained by mechanical process from sound, fresh and fully ripe tomatoes and processed by heat, before or after being sealed in a container so as to prevent spoilage. The juice may also be obtained by reconstituting the concentrate with water for the purpose of maintaining the essential composition and quality factors of the juice. The product shall be free from extraneous plant material including skins, seeds and other coarse parts of tomato but may contain finely divided insoluble solids from tomato flesh.

2. The product shall have characteristic red colour and good flavour which is characteristic of properly processed product and have an evenly divided texture and consistency and product shall be free from foreign taste, in particular, the taste of burned or caramelized products. Mineral impurities content shall not exceed 0·1 per cent of the dry weight content reduced by common salt.

3. The substances that may be added to the tomato juice are common salt, sugar, dextrose, spices, aromatic herbs and their extracts and natural aromas and other ingredients whose standards are prescribed in these regulations.

4. The product shall be free from any added colours or artificial flavours.

5. The product shall also conform to the requirements prescribed in table below:-

Table

S.No.	Characteristic	Requirement
(1)	(2)	(3)
1.	Vacuum in the can, in mm,(Minimum)	Negative
2.	Head space in the can in mm,(Maximum)	7
3.	Total soluble solids (exclusive of salt)% by weight,(Minimum)	5.0
4.	Sodium Chloride % by weight, (Maximum)	3.0
5.	Total titrable acidity (expressed as citric acid) % by weight, (Maximum)	10.0
6.	Volatile acidity (expressed as acetic acid) % by weight, (Maximum)	0.4
7.	pH, (Maximum)	4.5
8.	Sugar content (expressed as invert sugar), % by weight, (Maximum)	42.0

6. Containers shall be well filled the product which shall occupy not less than 90 per cent. of the water capacity of the container.
Note 1.- The water capacity of the container is the volume of distilled water at 27° C which the sealed container will hold when completely filled.
Note 2.- When the product is packed in glass containers, the water capacity shall be reduced by 20 ml.]

2.3.9 Thermally Processed Fruit Nectars:

1. Thermally Processed Fruit Nectars (Canned, Bottled, Flexible Pack And / Or Aseptically Packed) means an unfermented but fermentable pulpy or non-pulpy, turbid or clear product intended for direct consumption made from fruit singly or in combination, obtained by blending the fruit juice / pulp/fruit juice concentrate and/ or edible part of sound, ripe fruit(s), concentrated or unconcentrated with water, nutritive sweeteners and any other ingredient appropriate to the product and processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

2. Lemon and Lime juice may be added as an acidifying agent in quantities which would not impair characteristic fruit flavour of the fruit used. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements: —

[72][****]	*Min. Fruit Juice Content (%)*	*Acidity Expressed as Citric Acid Max (%)*
NECTARS OF CITRUS JUICE		
Orange Nectar	40	1.5
Grape Fruit Nectar	20	1.5
Pineapple Nectar	40	1.5
Mango Nectar	20	1.5
Guava Nectar	20	1.5
Peach Nectar	20	1.5
Pear Nectar	20	1.5
Apricot Nectar	20	1.5
Non-pulpy Black Currant Nectar	20	1.5
Other Fruit Nectar	20	1.5
Other Fruit Nectars of High Acidity/Pulpy / Strong flavour	20	1.5
Mixed Fruit Nectar	20	1.5

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.10: Thermally Processed Fruit Beverages / Fruit Drink/ Ready to Serve Fruit Beverages

1. Thermally Processed Fruit Beverages / Fruit Drink/ Ready to Serve Fruit Beverages (Canned, Bottled, Flexible Pack And/ Or Aseptically Packed) means an unfermented but fermentable product which is prepared from juice or Pulp/Puree or concentrated juice or pulp of sound mature

fruit. The substances that may be added to fruit juice or pulp are water, peel oil, fruit essences and flavours, salt, sugar, invert sugar, liquid glucose, milk and other ingredients appropriate to the product and processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall meet the following requirements: —

(i) [72][****]

(ii) Fruit juice content (m/m)

(a)	Lime/Lemon ready to serve beverage	Not less than 5.0 percent
(b)	All other beverage/drink	Not less than 10.0 percent

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.11: Thermally Processed Mango Pulp / Puree and Sweetened Mango Pulp / Puree

1. Thermally Processed Mango Pulp / Puree and Sweetened Mango Pulp / Puree (Canned, Bottled, Flexible Pack And/ Or Aseptically Packed) means unfermented but fermentable product intended for direct consumption obtained from edible portion of sound, ripe mangoes (Mangifera indica.L.), by sieving the prepared fruits, where as, the puree is obtained by finely dividing the pulp by a finisher or other mechanical means and processed by heat in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

2. It may contain one or more nutritive sweeteners in amounts not exceeding 50 gm/ kg. However, the product shall be described as sweetened Mango pulp/ puree if the amount of nutritive sweeteners is in excess of 15 gm / kg.

3. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements: -

(i) Total Soluble Solids (m/m)

(a)	Sweetened	Not less than 15.0 percent
(b)	Unsweetened (Natural Mango Pulp)	Not less than 12.0 percent
(ii)	Acidity as Citric Acid (For sweetened canned mango pulp)	Not less than 0.3 percent

4. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.12 Thermally Processed Fruit Pulp / Puree And Sweetened Fruit Pulp / Puree other than

Mango

1. Thermally Processed Fruit Pulp / Puree And Sweetened Fruit Pulp / Puree other than Mango (Canned, Bottled, Flexible Pack And / Or Aseptically Packed) means unfermented but fermentable product intended for direct consumption obtained from edible portion of sound, ripe fruit of any suitable kind & variety by sieving the prepared fruits, where as, the puree is obtained by finely dividing the pulp by a finisher or other mechanical means and processed by heat in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

2. It may contain one or more nutritive sweeteners in amounts not exceeding 50 gm/Kg. However, the product shall be described as sweetened pulp/puree if the amount of nutritive sweeteners is in excess of 15 gm. /kg.

3. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements: -

(i)	Total Soluble Solids (m/m) exclusive of added sugar	Not less than 6.0 percent
(ii)	Acidity as Citric Acid	Not less than 0.3 percent

The container shall be filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.13 **Thermally Processed Concentrated Fruit / Vegetable Juice Pulp/ Puree**

1. Thermally Processed Concentrated Fruit / Vegetable Juice Pulp/ Puree (Canned, Bottled, Flexible Pack And/ Or Aseptically Packed) means the unfermented product which is capable of fermentation, obtained from the juice or pulp or puree of sound, ripe fruit(s) / vegetable(s), from which water has been removed to the extent that the product has a total soluble content of not less than double the content of the original juice/ pulp/ puree prescribed vide in regulation 2.3.6 and 2.3.7. Natural volatile components may be restored to the concentrates where these have been removed. It may be pulpy, turbid or clear and preserved by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

2. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.14 Thermally Processed Tomato Puree And Paste

1. Thermally Processed Tomato Puree And Paste (Canned, Bottled, Flexible Pack And/ Or Aseptically Packed) means unfermented product which is capable of fermentation, obtained by concentrating the juice of sound ripe tomatoes to the desired concentration. It may contain salt and other ingredients suitable to the products.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B.

It shall meet the following requirements: —

S.No	Product	Total Soluble Solids (w/w)
1	Tomato puree	Not less than 9.0 percent
2	Tomato Paste	Not less than 25 percent

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.15 Soup Powders:

1. Soup Powders means the products obtained by mechanical dehydration of fresh vegetables/ fruits juice/ pulp/puree of sound, vegetables / fruits and or earlier concentrated, dehydrated, frozen or processed fruits & vegetables, singly or in combination by blending with salt, nutritive sweeteners, spices and condiments and any other ingredients suitable to the product, as appropriate to the product and packed suitably to prevent spoilage.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall comply with the following requirements: —

(i)	Moisture (m/m)	Not more than 5.0 percent
(ii)	Total soluble solids (m/m) (on dilution on ready to serve basis)	Not less than 5.0 percent

2.3.16 Fruit/Vegetable Juice / Pulp/ Puree With Preservatives For Industrial Use only:

1. Fruit/Vegetable Juice / Pulp/ Puree With Preservatives For Industrial Use only means an unfermented but fermentable product, pulpy, turbid or clear, obtained by a mechanical process from sound ripe fruits/ vegetables.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B.

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.17 Concentrated Fruit Vegetable Juice /Pulp / Puree With Preservatives For Industrial Use Only:

1. Concentrated Fruit Vegetable Juice /Pulp / Puree With Preservatives For Industrial Use Only means an unfermented product, which is capable of fermentation, obtained from the juice or pulp or puree of fruit(s) / vegetable (s), from which the water has been removed to the extent that the product has a soluble solids content of not less than double the content of the original juice, pulp,

puree prescribed under Regulation 2.3.6 and Regulation 2.3.7. It may be pulpy, turbid or clear.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B.

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.18 Tamarind Pulp/Puree and Concentrate:

1. Tamarind Pulp/Puree and Concentrate means the unfermented product which is capable of fermentation, obtained from fresh or dried tamarind, by boiling with water and sieving it, and preserved either by thermal processing or by using permitted preservatives.

2. The Tamarind Concentrate is the product obtained from tamarind pulp/ puree from which water has been removed by evaporation to achieve appropriate concentration.

3. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

	Minimum TSS Percent	Minimum Acidity Percent	Ash Insoluble in dilute HCl Percent (Maximum)
Tamarind Pulp/Puree	32	4.5	0.4
Tamarind Concentrate	65	9.0	0.8

4. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.19 Fruit Bar/ Toffee:

1. Fruit Bar/ Toffee means the product prepared by blending Pulp/Puree from sound ripe fruit, fresh or previously preserved, nutritive sweeteners, butter or other edible vegetable fat or milk solids and other ingredients appropriate to the product & dehydrated to form sheet which can be cut to desired shape or size.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall comply with the following requirements:—

(i)	Moisture (m/m)	Not more than 20.0 percent
(ii)	Total soluble solids (m/m)	Not less than 75.0 percent
(iii)	Fruit content (m/m)	Not less than 25.0 percent

2.3.20 Fruit/Vegetable, Cereal Flakes:

1. Fruit/Vegetable, Cereal Flakes means the product prepared by blending fruit(s) Pulp/Puree of sound ripe fruit(s) / vegetables of any suitable variety, fresh, frozen or previously preserved, starch, cereals & nutritive sweeteners, other ingredients appropriate to the product with or without salt & dehydrated in the form of flakes.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall comply with the following requirements:—

(i)	Moisture (m/m)	Not more than 6.0 percent
(ii)	Acid insoluble Ash (m/m)	Not more than 0.5 percent
(iii)	Starch (m/m)	Not more than 25.0 percent

2.3.21 Squashes, Crushes, Fruit Syrups/Fruit Sharbats and Barley Water:

1. Squashes, Crushes, Fruit Syrups/Fruit Sharbats and Barley Water means the product prepared from unfermented but fermentable fruit juice/puree or concentrate clear or cloudy, obtained from any suitable fruit or several fruits by blending it with nutritive sweeteners, water and with or without salt, aromatic herbs, peel oil and any other ingredients suitable to the products.

1.1 Cordial means a clear product free from any cellular matter, obtained by blending unfermented but fermentable clarified fruit juice with nutritive sweeteners & water with or without salt and peel oil and any other ingredients suitable to the products.

1.2 Barley water means the product prepared from unfermented but fermentable fruit juice by blending it with nutritive sweeteners, water with or without salt and peel oil and barley starch not less than 0.25 percent and any other ingredient suittable to the product.

1.3 The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall comply with the following requirements:—

	Name of the products	*Min (%) of fruit juice/ puree in the final product*	*Total Soluble Solids Min (%)*	*Acidity expressed as Citric Acid Max (%)*
(1)	Squash	25	40	3.5
(2)	Crush	25	55	3.5
(3)	Fruit Syrup/Fruit Sharbats	25	65	3.5
(4)	Cordial	25	30	3.5
(5)	Barley Water	25	30	2.5

1.4 Any syrup/ sharbats containing a minimum of 10 percent of dry fruits shall also qualify to be called as fruits syrups.

1.5 The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity

of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.22 Ginger Cocktail:

1. Ginger Cocktail (Ginger Beer Or Gingerale) means the product prepared by blending ginger juice or its oleoresin or essence with water and nutritive sweeteners.

2. The product shall be free from extraneous matter. When suitably diluted shall have the colour and flavour characteristic of the product.

3. The minimum total soluble solids shall not be less than 30.0 percent (m/ m).

4. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B.

5. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.23 Synthetic Syrup for use in Dispensers for carbonated water:

1. Synthetic Syrup for use in Dispensers for carbonated water means carbonated water obtained by blending nutritive sweeteners with water and other ingredients appropriate to the product.

2. The total soluble solid content (m/m) of the product shall not be less than 30 percent. The product when suitably reconstituted shall conform to the requirements of carbonated water and match in all respects, except Carbon Dioxide contents, with similar product as bottled for direct consumption. It shall be free from extraneous matter.

3. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B.

4. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.24 SYNTHETIC SYRUP or SHARBAT

1. Synthetic syrup or sharbat means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards namely:—

Total soluble solids Not less than 65 per cent by weight.

2.3.25 Murabba

1. Murabba means the product, prepared from suitable, sound whole or cut grated fruits, rhizome or vegetables, appropriately prepared, suitable for the purpose, singly or in combination, by impregnating it, with nutritive sweeteners to a concentration adequate to preserve it.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall conform to the following composition:

(i) Total soluble solids (m/m) Not less than 65.0 percent

(ii) Fruit contents (m/m) Not less than 55.0 percent

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.26 Candied, Crystallised And Glazed Fruit / Vegetable / Rhizome / Fruit Peel:

1.1 Candied Fruits / Vegetables/ Rhizome / Fruit Peel means the product prepared from sound and ripe fruits, vegetables, rhizomes or fruit peel, of any suitable variety, appropriately prepared, by impregnating it with nutritive sweeteners to a concentration adequate to preserve it.

1.2 Crystallised Fruit / Vegetable/ Rhizome / Fruit Peel means the product prepared from candied product by coating with pure crystallised sugar or by drying the syrup on wet candied fruit.

1.3 Glazed Fruit/ Vegetable/Rhizome / Fruit Peel means the product prepared from candied product by coating it with a thin transparent layer of heavy syrup with or without pectin which has dried to a more or less firm texture on the product.

1.4 The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i)	The percentage of total sugar (w/w)	Not less than 70.0
(ii)	Percentage of reducing Sugar to total sugar	Not less than 25.0

2.3.27 Tomato Ketchup and Tomato Sauce:

1. Tomato Ketchup and Tomato Sauce means the product prepared by blending tomato juice/Puree/Paste of appropriate concentration with nutritive sweeteners, salt, vinegar, spices and condiments and any other ingredients suitable to the product and heating to the required consistency. Tomato Paste may be used after dilution with water suitable for the purpose of maintaining the essential composition of the product.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i) Total Soluble solids (m/m) Salt free basis — Not less than 25.0 percent

(ii) Acidity as acetic acid — [56][Not less than 0.2 percent]

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.28 Culinary Pastes / Fruits and Vegetable Sauces Other Than Tomato Sauce and Soya

Sauce

1. Culinary Pastes / Fruits and Vegetable Sauces Other Than Tomato Sauce and Soya Sauce means a culinary preparation used as an adjunct to food, prepared from edible portion of any suitable fruit/vegetable including, roots, tubers & rhizomes, their pulps/purees, dried fruits, singly or in combination by blending with nutritive sweeteners, salt, spices and condiments and other ingredient appropriate to the product.

2. The product may contain food additives permitted in these regulations including Appendix A. It may contain caramel but shall not contain any other added colour whether natural or synthetic. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

	Name of the Product	*Total Soluble Solids (Salt free basis) (m/m)*	*Acidity % (as acetic acid)*
(1)	Chilli Sauce	Not less than 8.0 percent	Not less than 1.0 percent
(2)	Fruits / Vegetable Sauces	Not less than 15.0 percent	Not less than 1.2 percent
(3)	Culinary Paste/ Sauce	Not less than 8.0 percent	Not less than 1.0 percent
(4)	Ginger Paste	Not less than 3.0 percent	Not less than 1.0 percent

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.29 Soyabean Sauce:

1. Soyabean Sauce means the product obtained from wholesome soyabeans, by fermenting the soyabean paste in which trypsin inhibitors have been inactivated & blending with salt, nutritive sweeteners. It may contain spices and condiments and other ingredients appropriate to the product preserved by using permitted preservative.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i)	Total Soluble solids (m/m) Salt free basis	Not less than 25.0 percent
(ii)	Acidity as acetic acid	Not less than 0.6 percents

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

Amendment for substitution of highlighted provision

[75]**[2.3.29 SOYBEAN SAUCE. -** (1) Soybean Sauce means the product obtained from wholesome soybeans, by fermenting the soybean paste in which trypsin inhibitors have been completely inactivated & blending with salt, nutritive sweeteners. It may contain spices and condiments and other ingredients appropriate to the product preserved by using permitted preservative.

(2) The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements, namely: —

Sr. No.	Parameter	Limit
1.	Total Soluble Solids (m/m)	not less than 15.0 percent Salt free basis
2.	Acidity as acetic acid	not less than 0.6 percent
3.	Total nitrogen m/m	not less than 1.0 percent

(3) The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20°C which the sealed container is capable of holding when completely filled.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

2.3.30 Carbonated Fruit Beverages or Fruit Drinks:

1. Carbonated Fruit Beverages or Fruit Drink means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination. It may contain peel oil and fruit essences. It may also contain any other ingredients appropriate to the products.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i) [72][****]

(ii) Fruit content (m/m)

(a) Lime or Lemon juice — Not less than 5.0 percent

(b) Other fruits — Not less than 10.0 percent

3. The product shall have the colour, taste & flavour characteristic of the product & shall be free from extraneous matter.

[22][3A. In case the quantity of fruit juice is below 10.0 per cent. but not less than 5.0 per cent. (2.5 per cent. In case of lime or lemon), the product shall be called 'carbonated beverages with fruit juice' and in such cases the requirement of TSS (Total Soluble Solids) shall not apply and the quantity of fruit juice shall be declared on the label.]

4. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

[41][**2.3.31 JAMS, FRUIT JELLIES AND MARMALADES**:

1. Jam means the product prepared from a suitable fruit ingredient of one or two or more types which shall be—

(i) whole fruit, pieces of fruit, fruit pulp or fruit puree;
(ii) with or without fruit juice or concentrated fruit juice or dehydrated fruit as an optional ingredient;
(iii) mixed with a nutritive sweetener, with or without water; and
(iv) processed to a suitable consistency.

2. Fruit jelly means product prepared by boiling fruit juice or fruit(s) or aqueous extracts of one or more fruits of sound quality, with or without water, expressing and straining the juice, adding nutritive sweeteners, and concentrating to such a consistency that gel formation takes place on cooling. The product shall be clear, sparkling and translucent. It may also contain any other ingredient suitable to the products including derivatives like fibre, extracts, spices and condiments.

3. Marmalade means a mixture brought to a suitable gelled consistency of sugars and one or more of the products obtained from fruit including pulp, puree, juice, aqueous extracts and peel.

4. Jelly marmalade means 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.

5. Jams, fruit jellies and marmalades shall be prepared from any fruit ingredient singly or in combination.

6. The prepared fruit content in jams, jellies and marmalades shall be not less than 45 per cent. by weight, except in strawberry, raspberry and ginger jams when the minimum fruit content shall be not less than 25 per cent. by weight. The minimum fruit content for cashew apples shall be 23 per cent. and 8 per cent. for passion fruit.

7. The total soluble solids content, in the case of jams shall be not less than 65per cent. by weight and not less than 60 per cent. by weight in case of jellies and marmalades.

Amendment for substitution of highlighted provision

[77][7. The total soluble solid content, in the case of jams shall not be less than 65 Percent by mass content and not less than 60 percent by mass content, in case of jellies and marmalades. To be called as a reduced sugar product, Jam, Jellies and marmalades shall not have TSS more than 45 percent by mass content.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

8. The other substances that may be added to the products are cane sugar, sucrose, dextrose, and invert sugar, liquid glucose, honey, salt, herbs, spices, condiments and their extracts and other ingredients appropriate to the product whose standards are prescribed in these regulations.

9. Pectin derived from any fruit may be used at GMP level.

10. The product shall conform to the following quality factors, namely: -

(1) in case of 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;

(2) in case of 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 of attractive colour. 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.

11. The product shall be free from extraneous matter normally associated with the fruits such as skin, pits, pit fragments and seeds.

12. Containers shall be well filled with the product which shall occupy not less than 90 per cent. of the water capacity of the container.

Note 1.- The water capacity of the container is the volume of distilled water at 27°Cwhich the sealed container will hold when completely filled.

Note 2.- When product is packed in glass containers, the water capacity shall be reduced by 20 ml.

13. Standards specified in this sub-regulation shall not apply to—

(a) the products when indicated as being intended for further processing including as those intended for use in the manufacture of fine bakery wares, pastries or biscuits;

(b) the products which are clearly intended or labelled as intended for special dietary uses;

(c) the reduced sugar products or those with very low sugar content;

(d) the products where the foodstuffs with sweetening properties have been replaced wholly or partially by food additive sweeteners.

Amendment for substitution of highlighted provision

[77][13. Standards specified in this sub-regulation shall not apply to the products which are clearly intended or labelled as intended for special dietary uses.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

Explanation: - for the purpose of this sub-regulation, -

(a) "fruit" means 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;

(b) "fruit pulp" means the edible portions of the fruit, mashed or cut into pieces, but not reduced to a puree;

(c) "fruit puree" means fruit ingredient finely divided by sieving, screening or other mechanical means;

(d) "fruit juice" means 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;

(e) "soluble solids" means per cent. by weight of soluble solids as determined by the refractometric method corrected to $20^{O}C$ using the International Sucrose Scale but making no correction for insoluble solids or seeds;

(f) "pit" means whole pit or stone in fruits, such as cherries, that are normally pitted; or a piece of pit of approximately one-half pit;

(g) "pit fragments" means pieces of pit less than the equivalent of one-half pits, and which weighs at least 5 mg.]

2.3.33 Fruit Cheese:

1. Fruit Cheese means the product prepared from pulp/puree of sound, ripe fruit (s), whether fresh, frozen or previously preserved or dry fruits, by cooking with salt, nutritive sweeteners to attain a thick consistency so that it sets on cooling. Cheese shall be neither too soft nor too hard to chew. It may be prepared from any of the suitable fruits, singly or in combination. It shall have the flavour of the original fruit(s) and shall be free from burnt of objectionable flavours and crystallization.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirement: —

Total soluble solids (m/m)	Not less than 65.0 percent

3. The product shall be manufactured from not less than 45 percent by weight, of original prepared fruit, exclusive of any added sugar or optional ingredients of finished product except where fruit is strawberry or raspberry where it shall contain not less than 25 percent fruit.

2.3.35 Dehydrated Fruits:

1. Dehydrated Fruits means the product, prepared from edible part of suitable variety of sound fruit, free from blemishes, insect or fungal infection, of appropriate maturity, from which, moisture has been removed, under controlled conditions of temperature, humidity and airflow, to the extent that the product is preserved. t may be whole, sliced, quarters, pieces or powdered. The finished product shall have uniform colour and shall be free from extraneous matter. The product shall have moisture content not more than 20 percent m/m. When in powder form, it shall be free flowing and free from agglomerates.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B.

2.3.36 Dehydrated Vegetables:

1. Dehydrated Vegetables means the product, prepared from edible portions of suitable

variety of sound vegetable, free from insect or fungal infection, free from blemishes, suitably prepared, from which moisture has been removed under controlled conditions of temperature, humidity & airflow, to the extent that the product is preserved.

2. It may be whole, sliced, quarters, pieces, flakes, kibbled granules or powdered. The finished product shall have uniform colour and shall be free from discolouration due to scorching or enzymatic reaction. It shall be free from stalks, peels, stems and extraneous matter. When in powder form, it shall be free flowing and free from agglomerates.

3. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the requirements as given in the Table below

S. No.	Name of Vegetables	Moisture not more than (percent)	Sulphur Dioxide not more than (PPM)	Total ash not more than (percent)	Ash insoluble dilute HCl not more than (percent)	Peroxidase Test
1.	Green Leafy Vegetables	7	2000 ppm	-	-	Negative
2.	(a) Tubers like Arvi (b) Lotus Root Tapioca (c) Yam (d) Carrot (e) Potato	7	2000 ppm	-	-	Negative
3.	Karela	6	-	-	-	Negative
4.	Cabbage	6	2000 ppm	-	-	Negative
5.	Okra	8	2000 ppm	-	-	Negative
6.	Other Vegetables	8	2000 ppm	5	0.5	Negative
7.	Powders of onion and Garlic	5	-	5	0.5	Negative
8.	Powders of other vegetables including tomatoes	5	2000 ppm	5	0.5	Negative

Amendment for substitution of highlighted provision

[77][2.3.36 Dehydrated Vegetables:

1. Dehydrated Vegetables means the product, prepared from edible portions of suitable variety of sound vegetable, free from insect or fungal infection, free from blemishes, suitably prepared, from which moisture has been removed under suitable conditions of temperature, pressure, humidity & airflow, to the extent that the product is preserved by any suitable method.

2. It may be whole, sliced, quarters, pieces, flakes, kibbled granules or powdered. The finished product shall have uniform colour and shall be free from discolouration due to

scorching or enzymatic reaction. It shall be free from stalks, peels, stems and extraneous matter. When in powder form, it shall be free flowing and free from agglomerates.

3. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the requirements as given in the Table below: -

S. No	Name of Vegetables	Moisture not more than (percent)	Acid insoluble Ash not more than (percent)	Peroxidase Test
1	All dehydrated vegetables	8.0	0.5	Negative
2	Powders of all vegetables	5.0	0.5	Negative.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

2.3.37 Frozen Fruits/Fruit Products:

1. Frozen Fruits/Fruit Products means the product frozen in blocks or individually quick frozen and offered for direct consumption, if required. Frozen Fruits/Fruit products are prepared from fresh, clean, sound, whole, fruits of suitable maturity, free from insect or fungal infection, which are washed, sufficiently blanched to inactivate enzymes, if required, and are subjected to a freezing process in appropriate equipment. Freezing operation shall not be regarded as complete unless and until the product temperature has reached (minus) - 18°C at the thermal center after thermal stablization. It may be prepared in any style appropriate for the respective Fruits/Fruit product in normal culinary preparation. It may contain salt, nutritive sweeteners, milk solids, spices and condiments and any other ingredient suitable to the product.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B.

2.3.38 Frozen Vegetables:

1. Frozen Vegetables means the product frozen in blocks or individually quick frozen and offered for direct consumption, if required. Frozen vegetables are prepared from sound, clean vegetables of suitable maturity, free from insect or fungal infection, which are washed, sufficiently blanched to inactivate enzymes and are subjected to a freezing process in appropriate equipment. Freezing operation shall not be regarded as complete unless and until the product temperature has reached (minus) - 18°C at the thermal center after thermal stabilization. It may be prepared in any style appropriate for the respective vegetable in normal culinary preparation. It may contain salt, nutritive sweeteners, milk solids, spices and condiments and any other ingredient suitable to the product.

2. It shall have normal colour characteristic of the individual Vegetable. It shall have taste & flavour characteristic of the kind & variety of the vegetable used & shall be free from sand, grit & other foreign matter.

3. The product shall test negative for peroxidase. The product shall conform to the

microbiological requirements given in Appendix B.

[67][2.3.38.A FROZEN BEANS

1. Frozen Beans shall be prepared from fresh, clean, sound, succulent pods of the plants of the species *Phaseolus vulgaris L.* or *Phaseoluscoccineus L.* Strings, stems, and stem ends shall be removed, and the pods are washed and sufficiently blanched to ensure inactivation of enzymes and adequate stability of colour and flavour and shall be stored at -18°C or below.

2. The product shall be of reasonably uniform colour and free from foreign flavour or odour, other than those imparted by any added ingredients. It shall be clean, free from sand, grit and other foreign material and shall test negative for Peroxidase. It shall not contain any added colour.

3. The product may contain sugars (Sucrose, invert sugar, dextrose, fructose, glucose syrup, and dried glucose syrup), salt, spices and herbs, edible fats and oils, sauces, milk solids and any other ingredients suitable to the product whose standards are prescribed under Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

4. Frozen beans may be of the following styles and shall be labelled accordingly:-

(i) Whole;
(ii) Cut;
(iii) Short cut;
(iv) Sliced; and
(v) Other- Any other style of presentation is permitted provided that it is sufficiently distinctive from other forms of presentation laid down in this standard and is adequately described on the label to avoid confusing or misleading the consumer.

5. The product shall not exceed the tolerance for visual defects as given in table below. The maximum number of defects in each category shall not exceed thetolerance given in column (3). The combined total of each category shall not exceed the limits indicated in S.No.10 of the Table. The standard sample size shall be 1kg for Category 1 defects and 300gm for other defect categories.

S.No	**Defects**	**Total allowable numbers of defects for each Category (Maximum)**	
(1)	**(2)**	**(3)**	
		Category 1 (For all styles except whole style)	**Category 2 For whole style**
1.	Extraneous Vegetable Material (EVM) (i) Bean Leaf (each piece)	15	

	(ii) Other Extraneous Vegetable Material (EVM) (each piece)		15
2.	Stem end		
3.	Major and Minor blemish	30	20
4.	Mechanical Damage(Whole and cut style)	20	10
5.	Undeveloped (whole style)		
6.	Tough strings	10	6
7.	Fibrous unit		
8.	Combined total Allowable number of defects (Maximum)	60	40
9.	Small pieces(Whole, cut and slices styles)	Not more than 20 per cent. mm	

Explanation:-for the purposes of this sub-regulation,-

(i) 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, extraneous vegetable material comprising bean leaf material shall be differentiated from the other.

(ii) 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.

(iii) Minor Blemish.-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.

(iv) Major Blemish.-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.

(v) 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.

(vi) Undeveloped (Whole Style only).- Each unit which measures less than 3 mm at its widest point.

(vii)Tough Strings.-Tough fibre which will support a weight of 250 g for 5 seconds or more.

(viii) 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.

(ix) Small Pieces.-(Cut and Sliced Styles): bean pieces less than 10 mm in length including loose seeds and pieces of seeds.

2.3.38.B FROZEN CAULIFLOWER:

1. Frozen cauliflower shall be prepared from fresh, clean, sound heads of the cauliflower plant of the species *Brassica oleracea*L. var. *botrytis* L., from which heads may be trimmed and separated into parts, are washed and sufficiently blanched to ensure inactivation of enzymes and stability of colour and flavour and shall be stored at -18°C or below. The product may contain salt, spices and herbs, sugars, edible fats and oils, sauces, milk solids and any other ingredients suitable to the product whose standards are prescribed under Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

2. 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. The stem or branch portions may be light green or have a tinge of blue. It shall be free from foreign flavours or odours, other than those imparted by any added ingredients. The product shall be clean, free from sand, grit and other foreign material and shall test negative for peroxidase. It shall not contain any added colour.

3. The product may be presented in one of the following styles and shall be labelled accordingly:-

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

(ii)Split: the whole head, cut vertically into two or more sections.

(iii)Florets: segments of the head, which may have a portion of the secondary stem attached. Small, tender modified leaves may be present or attached to the units.

(iv) Others: any other presentation of the product is permitted provided that it is sufficiently distinctive from other forms of presentation laid down in this standard and is adequately described on the label to avoid confusing or misleading the consumer.

4. The product shall not exceed the tolerance for visual defects as given in Table below. The maximum number of defects shall not exceed the tolerance given in column (3) (4) and (5) of the following Tables. The combined total of all categories shall not exceed the limits indicated in S.No.9 of Table 1 for whole styles and S.No 11 of table 2 for split, florets and other styles. The standard sample size shall be 500gm.

Table 1
Whole Style

S.No	**Defects**	**Total allowable numbers of defects for each Category (Maximum)**		
		Category 1 (Minor)	**Category 2 (Major)**	**Category 3 (Serious)**
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1	Discolouration(each unit)- Light and Dark			

2	Blemished (each head)- Minor, Major and Serious	10	6	4
3	Mechanical Damaged (each head)			
4	Fibrous (each unit)- Fibrous Major and Fibrous Serious			
5	Poorly trimmed (each head)			
6	leaves (each $2cm^2$)			
7	Not compact (Each area or combined area of 12 cm^2)			
8	**Combined total Allowable number of defects(Maximum)**	10		

Table 2
Split, Florets and Other Styles

S.No	**Defects**	**Total allowable numbers of defects for each Category (Maximum)**		
		Category 1 (Minor)	**Category 2 (Major)**	**Category 3 (Serious)**
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1	Discolouration(each unit)-Light and Dark	25	16	4
2	Blemished (each unit)- Minor, Major and Serious			
3	Mechanical Damaged (each unit)			
4	Fibrous (each unit)- Fibrous Major and Fibrous Serious			
5	Poorly trimmed (each unit)			
6	Leaves (each 2 cm^2)			
7	Fragments (each 3per cent. m/m)			
8	Not compact (Each area or combined area of 12 cm^2)			
9	Loose stem (each piece)			
10	**Combined total Allowable number of defects(Maximum)**	25		

Explanation:- for the purpose of this sub-regulation,-

(i) Discolouration.- grey, brown, green or similar discolouration confined essentially to the flower surface of the unit and which materially detracts from the appearance of the product. Branches or stems with a bluish or greenish tinge are not be considered as discoloured.

(a)Light.- the discolouration disappears almost entirely upon cooking.

(b)Dark.- the discolouration does not disappear upon cooking.

(ii) 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 objectionably affected to such an extent that it would customarily be discarded under normal culinary preparation.

(iii) Mechanically Damaged.-

(a) Major (for split and floret styles).-A unit in which more than 50 per cent. of the curd (head or combine florets) has been mechanically damaged or is missing.

(b) Major (for whole Styles).-A unit in which more than 25 per cent. of the curd(head or combine florets) has been mechanically damaged or is missing.

(iv) Major Fibrous.-A unit which possess tough fibres that are quite noticeable and materially affect the eating quality.

(v) Serious Fibrous.-A unit which possesses tough fibres that are objectionable and of such nature that it would be customarily discarded.

(vi) Poorly Trimmed.-A unit which had deep-knife gouges or a ragged appearance.

(vii) Leaves.-Coarse green leaves or parts thereof whether or not attached to the unit.

(viii) Fragments.-Portions of the florets 5 mm or less across the greatest dimension.

(ix) Not Compact.-A unit in which the florets are spreading, or the flower head has 'ricey' appearance or the flower head is very soft or musty.

(x) Loose stem.- Each piece of stem exceeding 2.5 cm in length detached from a cauliflower unit.

2.3.38.C FROZEN PEAS:

1. Frozen peas shall be prepared from fresh, clean, sound, whole, immature seeds of peas plant of the species *Pisumsativum* L which have been washed, sufficiently blanched to ensureinactivation of enzymes and adequate stability of colour and flavour. It shall be stored at -18°C or below.

2. The product may contain sugars (Sucrose, invert sugar, dextrose, fructose, glucose syrup, dried glucose syrup), salt, spices and herbs, edible fats and oils, sauces, milk solids and any other ingredients suitable to the product whose standards are prescribed under Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

3. The product shall be of reasonably uniform green colour according to type, whole, clean, free from foreign matter and damage by insects or diseases. It shall be free from any foreign taste or smell and shall have a normal flavour, taking into consideration any ingredients added. It shall not contain any added colour.

4. The Alcohol-insoluble solid content (m/m) of the product shall not be more than 23 per cent. for the sample size of 500 gm of product tolerance limits of defects shall not exceed the following:

S.No.	Defects	Tolerance limits
1.	Blond Peas, m/m	Not more than 10 per cent.
2.	Blemished Peas, m/m	Not more than 8 per cent.
3.	Seriously Blemished Peas, m/m	Not more than 4 per cent.
4.	Pea Fragments, m/m	Not more than 15 per cent.
5.	Extraneous Vegetable Matter, m/m	Not more than 1 per cent.

Explanation:- for the purpose of this sub-regulation,-

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

(ii) Blemished Peas.-Peas which are slightly stained or spotted.

(iii) 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.

(iv) 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.

(v) Extraneous Vegetable Material. - Any vine or leaf or pod material from the pea plant, or other vegetable material such as poppy heads or thistles.

2.3.38.D FROZEN SPINACH:

1. Frozen spinach shall be prepared from fresh, clean, sound edible parts of the spinach plant of the species *Spinuciuoleruceu*L.. Frozen spinach shall be sorted, washed sufficiently and drained to ensure adequateinactivation of enzymes and stability of colour and flavour. It shall be stored at -18°C or below. The product may contain salt, spices and herbs, sugars, edible fats and oils, sauces, milk solids and any other ingredients suitable to the product whose standards are prescribed under Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

2. The product shall be of a reasonably uniform green colour, characteristic of the variety. It shall be free from any foreign flavours and odours other than those imparted by any added ingredients. It 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.It shall not contain any added colour.

3. The product may be presented in one of the following styles and shall be labelled accordingly:-

(i) **Whole spinach:** the intact spinach plant with root removed.

(ii)Leaf spinach: substantially whole leaves most of which are separated from the root crown

(iii)Cut leaf spinach: parts of leaves of spinach cut into pieces.

(iv) Chopped spinach: parts of leaves of spinach cut into small pieces but not comminuted to a pulp or puree.

(v)Pureed spinach: spinach finely divided or finely chopped or having passed through a sieve.

(vi)Others: any other presentation of the product shall be permitted provided that it is sufficiently distinctive from other forms of presentation laid down in this standard and is adequately described on the label to avoid confusing or misleading the consumer.

4. The product shall not exceed the tolerance for visual defect as given in Table below. The maximum number of each defects shall not exceed the tolerance indicated in column (3) (4) and (5) of the table 1 and column (3) and(4) of table 2. The combined total of all categories shall not exceed the limits indicated in S.No.8 of Table 1 for whole leaf and cut leaf style and S.No 6 of Table 2 for chopped style. The standard sample size shall be 300 gm for Table 1 and 100 gm for Table 2 and 3.

Table 1

Whole Leaf and Cut leaf Style

S.No	Defects	Total allowable numbers of defects for each Category (Maximum)

		Category 1 (Minor)	Category 2 (Major)	Category 3 (Serious)
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1.	Loose leaves (Whole style only)(each leaf)	20	10	4
2.	Discolouration- Minor and Major			
3.	E.V.M- Minor and Major			
4.	Seed heads (each whole head)			
5.	Seed heads (each portion)			
6.	Crowns (exclusive of whole style)(each whole crown)			
7.	Root material (each piece)			
8.	**Combined total Allowable number of defects(Maximum)**	20		
9.	Mineral impurities, m/m	not more than 0.1 per cent.		
10.	Salt-free dry matter, m/m	not less than 5.5 per cent.		

Table 2
Chopped Style

S.No	Defects	Total allowable numbers of defects for each Category (Maximum)	
		Category 1 (Minor)	**Category 2 (Major)**
(1)	**(2)**	**(3)**	**(4)**
1.	Discolouration (each cm^2)- Minor and Major	20	10
2.	E.V.M (each 1 cm)- Minor and Major		
3.	Flower buds (each 50 pieces)		
4.	Crown material (each piece)		
5.	Root material (each piece)		
6.	**Combined total Allowable number of defects (Maximum)**	20	
7.	Mineral impurities, m/m	not more than 0.1 per cent.	

8.	Salt-free dry matter, m/m	not less than 5.5 per cent.

Table 3
Pureed Style

S.No	Defects	Allowance
(1)	**(2)**	**(3)**
1.	Any dark particle or flower bud	Shall not affect the overall appearance of the product
2.	Mineral impurities, m/m	not more than 0.1 per cent.
3.	Salt-free dry matter, m/m	not less than 5.5 per cent.

Explanation:- for the purposes of this sub-regulation,-

(i) Loose leaves (Whole Style only).- Leaves which are detached from the crown.

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

(a) Minor.-Discoloration which is light in colour.

(b) Major.-Discoloration which is dark in colour.

(iii) Extraneous Vegetable Matter.-Harmless vegetable material, such as grass, weeds and straw.

(a) Minor.-Extraneous vegetable matter which is green and tender.

(b) Major.-Extraneous vegetable matter which is other than green or is coarse.

(iv) Seed Heads (Flower Stems).-The flower bearing portion of the spinach plant, which is longer than 25 mm.

(v) Flower Buds.-The separate flower buds detached from the seed head.

(vi) Crown (Exclusive of Whole Style).-The solid area of the spinach plant between the root and the attached leaf clusters.

(vii) Root Material.-Any portion of the root, either loose or attached to leaves.]

2.3.39 Frozen Curried Vegetables/Ready-to-Eat Vegetables:

1. Frozen Curried Vegetables/Ready-to-Eat Vegetables means the product prepared from Fresh, Dehydrated or Frozen or previously processed vegetables, legumes, cereals or pulses, whether whole or cut into pieces. Vegetable(s) either singly or in combination may be prepared in any suitable style applicable for the respective vegetables in normal culinary preparation. It may contain salt, nutritive

sweeteners, spices and condiments, edible vegetable oils and fats and milk fat and any other ingredients suitable to the product and subjected to freezing process in appropriate equipments. Freezing operation shall not be regarded as complete unless and until the product temperature has reached (minus) - 18°C at the thermal center after thermal sterilization.

2. The product shall conform to the microbiological requirements given in Appendix B.

2.3.40 Fruit Based Beverage Mix/Powdered Fruit Based Beverage:

1. Fruit Based Beverage Mix/Powdered Fruit Based Beverage means a product, in powder form, intended for use after dilution, obtained by blending fruit solids with nutritive sweeteners and other ingredients appropriate to the product & packed in hermetically sealed containers to prevent spoilage. It shall have colour & flavour characteristic of the named fruit. It may contain Vitamins and Minerals.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i)	Moisture (m/m)	Not more than 5.0 percent
(ii)	Fruit juice content (m/m) when reconstituted by dilution according to direction for use	Not less than 5.0 percent

2.3.41 Fruits and Vegetable Chutney:

1. Fruits and Vegetable Chutney means the product prepared from washed, clean, sound raw fruit(s) and / or vegetable(s) of any suitable variety, which have been peeled, sliced or chopped or shreded or comminuted and cooked with nutritive sweetener. It may contain salt, spices and condiments and any other ingredients suitable to the product and preserved by thermal processing or other means.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i)	Total soluble solids (m/m)	
	(a) Fruit Chutney	Not less than 50.0 percent
	(b) Vegetable Chutney	Not less than 25.0 percent
	(c) Hot and Sour (Spicy Chutney)	Not less than 25.0 percent
(ii)	Fruits and Vegetable content (m/m)	Not less than 40.0 percent
(iii)	pH	Not more than 4.6
(iv)	Total ash (m/m)	Not more than 5.0 percent
(v)	Ash insoluble in hydrochloric acid (m/m)	Not more than 0.5 percent

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20°C which the sealed container is capable of holding when completely filled. This requirement shall not be applicable for bulk packs for industrial use.

2.3.42 Mango Chutney:

1. Mango Chutney means the product prepared from washed clean sound mango (Mangifera indica L.) of any suitable variety, which have been peeled, sliced or chopped or shreded or

comminuted and cooked with nutritive sweeteners. It may contain Salt, Spices, Condiments and any other ingredient suitable to the product and preserved by thermal processing/ or other means.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i)	Total Soluble solids (m/m)	Not less than 50.0 percent
(ii)	Fruit content (m/m)	Not less than 40.0 percent
(iii)	pH	Not more than 4.6
(iv)	Total ash	Not more than 5.0 percent
(v)	Ash insoluble in hydrochloric acid	Not more than 0.5 percent

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20ºC which the sealed container is capable of holding when completely filled.

2.3.43 Pickles:

1. Pickles means the preparation made from fruits or vegetables or other edible plant material including mushrooms free from insect damage or fungal infection, singly or in combination preserved in salt, acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar jaggery, edible vegetable oil, green or red chillies, spices, spice extracts/oil, limejuice, vinegar/ acetic acid, citric acid, dry fruits and nuts. It shall be free from copper, mineral acid, alum, synthetic colours and shall show no sign of fermentation.

2. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. Pickles may be of combinations as given below:—

(i) Pickles in Citrus juice or Brine conforming to the following requirements:—

(a)	Drained Weight	Not less than 60.0 percent
(b)	Sodium Chloride content when packed in Brine	Not less than 12.0 percent
(c)	Acidity as Citric Acid when packed in Citrus Juice	Not less than 1.2 percent

(ii) Pickles in Oil

(a)	Drained Weight	Not less than 60.0 percent
(b)	Fruit and Vegetable pieces shall be practically remaining submerged in oil	

(iii) Pickles in Vinegar

(a)	Drained Weight	Not less than 60.0 percent
(b)	Acidity of vinegar as acetic acid	Not less than 2.0 percent

(iv) Pickle without medium means the pickles other than enumerated above. This may contain ingredients given in Para 1 of this specification. Such pickles shall be labelled as "(give name of vegetable or fruits) Pickle".

[32][2.3.44 TABLE OLIVES:

1. "Table Olives" means the product prepared from sound fresh fruits of varieties of the cultivated olive tree *(Olea europaea* L.*)* having reached proper maturity for processing whose shape, flesh-to-stone ratio, fine flesh, taste, firmness and ease of detachment from the stone, make them suitable for processing and have characteristic colour, flavour, odour and texture of the fruits.

2. Table olives may be -

(a) treated to remove its bitterness and preserved by natural fermentation, or by heat treatment, with or without the addition of permitted preservatives, or by any other means;

(b) packed with or without brine.

3. Types of table olives:

Table olives may be classified in the following types depending on the degree of ripeness of the fresh fruits, namely:-

(a) green olives:- fruits harvested during the ripening period, prior to colour development and when they reached to their normal size;

(b) olives turning colour:- fruits harvested before the stage of complete ripeness is attained, at colour change;

(c) black olives:- fruits harvested when fully ripe or slightly before full ripeness is reached.

4. Types of processed olives:

Olives shall be processed in the following manner, namely:-

(a) natural olives:- green olives, olives turning colour or black olives placed directly in brine where they undergo complete or partial fermentation, whether preserved or not by the addition of permitted acidifying agents, namely:-

(A) natural green olives;
(B) natural olives turning colour;
(C) natural black olives;

(b) treated olives:- green olives, olives turning colour or black olives that have undergone alkaline treatment, namely:-

(A) treated green olives in brine;
(B) treated olives turning colour in brine;
(C) treated black olives;
(D) green ripe olives;

(c) dehydrated or shrivelled olives:- green olives, olives turning colour or black olives that have undergone or not undergone mild alkaline treatment, preserved in brine or dehydrated in dry salt or by heating or by other technological process, namely:-

(A) dehydrated or shrivelled green olives;
(B) dehydrated or shrivelled olives turning colour;
(C) dehydrated or shrivelled black olives;

(d) olives darkened by oxidation:- green olives or olives turning colour preserved in brine, fermented or not, and darkened by oxidation with or without alkaline medium and shall be of uniform brown to black colour;

(e) other types of olives:- olives prepared by means distinct from or in addition to above, shall retain the name "olive" as long as the fruit is in accordance with the specification provided in regulation1.2, but the name for such type shall be clearly indicated.

5. Styles:

Olives may be offered in the following styles, namely:-

(a) whole olives:- olives, with or without their stem, which have natural shape and from which the stone (pit) has not been removed;

(b) cracked olives:- whole olives undergone a process whereby the flesh is opened without breaking the stone (pit), which remains whole and intact inside the fruit;

(c) split olives:- whole olives that are split lengthwise by cutting into the skin and part of the flesh;

(d) stoned (pitted) olives:- olives from which the stone (pit) has been removed and which retain their natural shape;

(e) halved olives:- stoned (pitted) or stuffed olives sliced into two parts, perpendicularly to the longitudinal axis of the fruit;

(f) quartered olives:- stoned (pitted) olives split into four parts, perpendicularly to the major axis of the fruit;

(g) divided olives:- stoned (pitted) olives cut lengthwise into more than four parts;

(h) sliced olives:- stoned (pitted) or stuffed olives sliced into segments of uniform thickness;

(i) chopped or minced olives:- small pieces of stoned (pitted) olives of no definite shape and devoid (no more than 5 per 100 of such units by weight) of identifiable stem insertion units as well as of slice fragments;

(j) broken olives:- olives broken while being stoned (pitted) or stuffed which may contain pieces of stuffing material;

(k) stuffed olives:- stoned (pitted) olives stuffed either with one or more suitable products including pimiento, onion, almond, celery, anchovy, olive, orange or lemon peel, hazelnut or capers with edible pastes;

(l) salad olives:- whole broken or broken-and-stoned (pitted) olives with or without capers, plus stuffing material, where the olives are the most numerous compared with the entire product marketed in this style;

(m) olives with capers:- whole, or stoned (pitted) olives, usually small in size, with capers and with or without stuffing, where the olives are the most numerous compared with the entire product marketed in this style.

6. Essential composition and quality factors:

(a) Composition:

(i) Ingredients:- Olives as specified in clause 3, which are treated and packed in the manner specified in clause 2 and may contain any of the following permitted ingredients, namely:-

(A) water (potable);

(B) edible salts;

(C) vinegar;

(D) olive oil or other edible vegetable oils as specified in regulation 2.2;

(E) honey and nutritive sugars as specified in regulation 2.8;

(F) any single or combination of edible material used as an accompaniment or stuffing;

(G) spices and aromatic herbs or natural extracts thereof;

(ii) Packing brines:- (A) Packing brines is the solution of salts dissolved in potable water, with or without addition of some or all the ingredients specified in entry (i).

(B) Brine shall be clean, free from foreign matter and shall comply with the hygiene requirements as specified in clause 9.

(C) Fermented olives held in packing medium may contain micro-organisms used for fermentation, including lactic acid bacteria and yeasts.

Table: Physico-chemical characteristics of the packing brine

Type and preparation	**Minimum sodium chloride content**	**Maximum pH limit**
Natural olives (by weight)	6.0 per cent.	4.3
Treated olives (by weight)	5.0 per cent.	4.3
Pasteurised treated and natural olives	GMP	4.3
Dehydrated or shrivelled olives (by weight)	8.0 per cent.	GMP
Darkened by oxidation with alkaline treatment	GMP	GMP

(b) Drained weight of product shall not be less than the following weight, namely:-

Whole olives	50.0 per cent. of net weight of the contents
Stoned (pitted) and stuffed olives	40.0 per cent. of net weight of the contents

(c) The container shall be well filled with the product and occupy not less than 90.0 per cent. of the water capacity of the container, when packed in the rigid containers.

(d) The water capacity of the container is the volume of distilled water at 20^0C, which the sealed container is capable of holding when completely filled.

7. Food additives:

The product may contain food additives specified in Appendix A to these regulations.

8. Contaminants, toxins and residues:

The product shall comply with the provisions of the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

9. Hygiene:

(a) The product shall be prepared and handled in accordance with the guidelines specified in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement specified in Appendix B.

10. Labelling:

(a) For labelling of the product, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply.
(b) In the case of stuffed olives, the style of stuffing shall be indicated in the following manner, namely:-

(i) "olives stuffed with ....." (single or combination of ingredients); or

(ii) "olives stuffed with ..... paste"(single or combination of ingredients)

(c) The packing medium (brine) along with its strength shall also be declared on the label.

11. Methods of sampling and analysis:

The method for sampling and analysis of the product shall be as specified in theFood Safety and Standards Authority of India Manual of Method of Analysis of Food.]

2.3.45 Grated Desiccated Coconut:

1. Grated Desiccated Coconut means the product obtained by peeling, milling and drying the kernel of coconut (cocos nucifera). The product may be in the form of thin flakes, chips or shreds. The product shall be white in colour free from foreign matter, living insects, mould, dead insects, insect fragments and rodent contamination. The product shall have pleasant taste and flavour, free from rancidity and evidence of fermentation. The product may contain food additives permitted in

these regulations including Appendix A. The products shall conform to the microbiological requirements given in Appendix B. The product shall conform to the following requirements:—

(i)	Extraneous Vegetable matter	Not more than 15 units/100 gm
(ii)	Moisture (m/m)	Not more than 3.0 percent
(iii)	Total Ash (m/m)	Not more than 2.5 percent
(iv)	Oil Content (m/m)	Not less than 55.0 percent
(v)	Acidity of extracted fat pressed as Lauric Acid (m/m)	Not more than 0.3 percent
(vi)	Sulphur Dioxide	Not more than 50.0 mg/kg

Explanation:— For the purpose of this paragraph Extraneous vegetable matter means fragments of shell, fibre, peel and burnt particles.

Substitution of highlighted provision

2.3.45 Desiccated Coconut

1. Desiccated Coconut means the product:
   (a) Prepared by peeling, milling, grating and drying the sound white kernel obtained from the whole nut of coconut (*Cocos nucifera*L.), having reached appropriate development for processing, without oil extraction.
   (b) processed in an appropriate manner, undergoing operations such as de-husking, hatcheting, paring, washing, comminuting, drying and sifting;
   (c) described in points (a) and (b) from which oil has been partially extracted by appropriate physical means.

2. The product may be presented in form of powder, flakes, chips and shreds. It shall be white to light creamy white in colour. It shall be free from foreign matter, living insects, mould, dead insects, insect fragments and rodent contamination. The product shall have pleasant taste and flavour, free from rancidity and evidence of fermentation. The product shall conform to the following:—

S.No.	**Parameters**	**Limits**
1	Moisture % m/m (Max)	3.0
2	Total acidity of the extracted oil measured as lauric acid % m/m (Max)	0.3
3	Oil content % m/m	
(a)	For without oil extraction as described in 1 (a) (Min)	60.0
(b)	For partial oil extraction as described in 1 (c)	35.0 to 60.0
4.	Total Ash % m/m (Max)	2.5
5.	Extraneous vegetable material, fragments per 100 g (Max)	15
6.	Foreign matter, in 100 g	Absent

Explanations:

i. Extraneous vegetable material: Harmless vegetable matter associated with the product. Foreign matter: Any visible and/or apparent matter or material not usually associated with the product.

2.3.46 VINEGAR:

1. Brewed Vinegar means a product obtained by alcoholic and acetic acid fermentation of any suitable medium such as fruits, malt (brewed exclusively from malted barley or other cereals), molasses, Jaggary, Sugar Cane juice etc. with or without addition of caramel and spices. It shall not be fortified with acetic acid.

a) The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. It shall meet the following requirements:—

(i)	Acidity (m/v)	Not less than 3.75 percent calculated as acetic Acid
(ii)	Total Solids (m/v)	Not less than 1.5 percent
(iii)	Total ash content	Not less than 0.18 percent

(iv) It shall not contain sulphuric acid or any other mineral acid. It shall be free from any foreign substances or colouring matter except caramel.

b) The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20°C which the sealed container is capable of holding when completely filled.

2. Synthetic Vinegar means the product prepared from acetic acid with or without caramel & spices and shall confirm to the following requirements:

(i)Acidity of the product shall not be less than 3.75 percent m/v.

(ii) It shall not contain sulphuric acid or any other mineral acid. It shall be free from any foreign substance or colouring matter except caramel.

2. Synthetic vinegar shall be distinctly labelled as SYNTHETIC - PREPARED FROM ACETIC ACID.

3. The container shall be well filled with the product and shall occupy not less than 90.0 percent of the water capacity of the container, when packed in the rigid containers. The water capacity of the container is the volume of distilled water at 20°C which the sealed container is capable of holding when completely filled.

2.3.47 NUTS AND RAISINS:

1. **Groundnut kernel** (deshelled) for direct human consumption commonly known as moongphali are obtained from the plant arachis hypogols. the kernels shall be free from non-edible seeds such as mahua, caster, neem or argemone etc.

It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt, clay etc. The kernels shall conform to the following standards, namely:—

Moisture	Not more than 7.0 per cent
Damaged kernel including slightly damaged kernel	Not more than 5.0 per cent by weight.

[51][omition]

2. Raisins means the product obtained by drying sound, clean grapes of proper maturity belonging to Vitis vinifera L. The product may be washed, with or without seeds and stems and may be bleached with Sulphur Dioxide. The product shall be free from foreign matter, living insects, mould, dead insects, insect fragments and rodent contamination. The product shall have uniform colour, pleasant taste and flavour, free from odour and taste and evidence of fermentation. The product shall be free from added colouring matter. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall conform to the following requirements:—

(i)	Moisture (m/m)	Not more than 15.0 percent
(ii)	Damaged Raisins (m/m)	Not more than 2.0 percent
(iii)	Sugared Raisins (m/m)	Not more than 15.0 percent

Explanation.- for the purpose of this paragraph,—

(i) 'Damaged Raisins' means raisins affected by sunburn, scars, mechanical injury which seriously affects the appearance, edibility and keeping quality;

(ii)'Sugared Raisins' means raisins with external or internal sugar crystals which are readily apparent and seriously affect the appearance of the raisins.

3. **Pistachio Nuts** means the product obtained from mature seeds of Pistacia vera L which have been sun dried and their shells opened naturally or mechanically. The product may be raw, roasted, salted and/or lime juice treated. The product shall be free from foreign matter, living insects, mould, dead insects, insect fragments and rodent contamination. The product shall have pleasant taste and flavour, free from odour and taste, mustiness and rancidity. The product shall conform to the following requirements:—

(i)	Moisture (m/m)	Not more than 7.0 percent
(ii)	Unopened Shells (m/m)	Not more than 2.0 percent
(iii)	Empty Shells (m/m)	Not more than 1.0 percent

Explanation.-for the purpose of this paragraph,—

(i)'Unopened Shells' means shells which are not split open but contain a fully developed kernel;

(ii) 'Empty Shells' means shells in which kernel is not developed;

(iii) 'Mouldy Shells' means nuts affected by mould.

4. **Dates** means the product obtained by drying sound, clean fruits of proper maturity belonging to Phoenix dactylifera. The product may be washed, pitted or unpitted, with or without cap, pressed or loose. The product may be treated with sugar, glucose syrup, flour and vegetable oil. The product shall be free from foreign matter, living insects, mould, dead insects, insect fragments and rodent contamination. The product shall have pleasant taste and smell, free from odour and evidence of fermentation. The product shall be free from any added colouring matter. The product may contain food additives permitted in these regulations including Appendix A. The product shall conform to the microbiological requirements given in Appendix B. The product shall conform to the following requirements:—

(i)	Moisture (m/m)	Not more than 30.0 percent
(ii)	Ash insoluble in dil Hcl	Not more than 0.1 percent
(iii)	Blemished / Damaged Units	Not more than 5.0 percent
(ii)	(iv) Extraneous matter	Not more than 1.0 percent

Explanation:—- For the purpose of this paragraph —

(i) 'Blemished' means units showing scars, discoloration, sun burn, dark spots on the surface;

(ii) 'Damaged' means dates affected by mashing and/ or tearing of the flesh exposing the pit or significantly changing the appearance.

(iii) 'Extraneous vegetable matter' means stalks, pieces of shells, pits, fibre, peel, etc.

5. **Dry Fruits and Nuts** means the products obtained by drying sound, clean fruits and nuts of proper maturity. The product may be with or without stalks, shelled or unshelled, pitted or unpitted or pressed into blocks. The product shall be free from mould, living / dead insects, insect fragments and rodent contamination. The product shall be uniform in colour with a pleasant taste and flavour characteristic of the fruit/ nut free from off flavour, mustiness, rancidity and evidence of fermentation. The product shall be free from added colouring. The product shall conform to the following requirements:—

(i)	Extraneous Vegetable matter (m/m)	Not more than 1.0 percent
(ii)	Damaged/ Discoloured units (m/m)	Not more than 2.0 percent
(iii)	Acidity of extracted fat expressed as oleic Acid	Not more than 1.25 percent

Explanation — For the purpose of this paragraph —

(i) 'Extraneous vegetable matter' means stalks, pieces of shells, pits, fibre, peel;

(ii) 'Damaged or Discoloured' means units affected by sunburn, scars mechanical injury, discolouration and insects.

[66][6. **Almond kernels.**- (1) Almond kernels means the product obtained from mature seeds of *Prunusamygdalus* Batsch, syn. *Prunusdulcis*(Mill.) D.A. Webb, from which the shell (ligneous endocarp) has been removed.

(2) The product shall be sound, whole, clean, sufficiently dried and free from living or dead insects, rancidity, visible foreign matter, visible moulds and rodent contamination.

(3) The product shall be uniform in colour with characteristic flavor of nuts, free from off odour and evidence of fermentation.

(4) The product shall also be free from added colouring and flavouring matter.

(5) It shall conform to the following requirements, namely:-

S. no.	Characteristics	Requirements	
(i)	Moisture (m/m), per cent	Not more than 6.0	
(ii)	Inshell almonds, shell or skin fragments, (m/m), per cent	Not more than 0.25	Total tolerance Not more than 10.0
(iii)	Rancid, rotten and damaged by insects or other pests (m/m), per cent	Not more than 1.0	
(iv)	Gummy and brown spot (m/m), per cent	Not more than 2.0	
(v)	Blemishes and discoloration(m/m), per cent	Not more than 4.0	
(vi)	Shrunken or shrivelled and not sufficiently developed kernels(m/m), per	Not more than 4.0	

	cent		
(vii)	Split, broken and halves (m/m), per cent	Not more than 5.0	
(viii)	Chipped and scratched (m/m), per cent	Not more than 10.0	
(ix)	Doubles or twins (m/m), per cent	Not more than 10.0	
(x)	Acid insoluble ash , per cent	Not more than 0.1	
(xi)	Oil content (m/m), per cent	Not less than 45.0	
(xii)	Acidity of extracted oil, expressed as oleic acid , per cent	Not more than 1.25	

Explanation:- For the purposes of this clause,-

(a) "double or twin" means almond kernel of characteristic shape, with one side flat or concave, as a consequence of the development of two kernels in the same shell;
(b) "clean" means free from visible adhering dirt or other foreign material;
(c) "sufficiently developed"means almond kernel of normal shape, without aborted or dried out portions; shrunken and shrivelled kernels are not sufficiently developed;
(d) "shrunken or shrivelled" means almond kernel which is extremely flat and wrinkled, or almond kernel with desiccated, dried out or tough portions when the affected portion represents more than one quarter of the kernel;
(e) "chipped kernel" means mechanically damaged almond kernel from which less than one quarter of the kernel is missing; it is not considered as a defect the loss, in aggregate, of less than the equivalent of a circle of 3 mm in diameter;
(f) "scratched kernel" means superficially mechanically damaged almond kernel with absence of part of the skin, affecting or not the endosperm; it is not considered as a defect lacks of skin or scratched areas of less, in aggregate, than the equivalent of a circle of 3 mm in diameter;
(g) "half" means longitudinally split almond kernel from which the two halves (cotyledons) are separated;
(h) "split or broken kernel" means mechanically damaged almond kernel from which more than one quarter of the kernel is missing;
(i) "piece" means small fragment of almond kernel which pass through a 10 mm round meshed sieve;
(j) "mould" means mould filaments visible to the naked eye, either inside or outside of the almond kernel;
(k) " rancidity" means oxidation of lipids or free fatty acid production giving a characteristic disagreeable flavour; an oily appearance of the flesh does not necessarily indicate a rancid condition;
(l) "rotten" means significant decomposition or decay caused by the action of micro-organisms or other biological processes, normally accompanied by changes in texture and/or colour;

(m) "insect or pest damage" means visible damage or contamination caused by insects, mites, rodents or other animal pests, including the presence of dead insects, insect debris or excreta;

(n) "living pests" means presence of living pests (insects, mites or others) at any stage of development (adult, nymph, larva, egg, etc.);

(o) "gummy" means resinous appearing substance, affecting or not the endosperm, covering in aggregate an area more than the equivalent of a circle of 6 mm in diameter;

(p) "brown spot" means slightly depressed brown spots on the almond kernel, affecting or not the endosperm, either single or multiple, caused by the sting of insects as the box elder bug (*Leptocoristrivittatus*Say), covering in aggregate an area more than the equivalent of a circle of 3 mm in diameter; and blemish and discoloration apparent and spread stains, other than gum and brown spot, or severe dark or black discoloration contrasting with the natural colour of the kernel skin, affecting in aggregate more than one quarter of the surface of the almond kernel; it is not considered as a defect the normal colour variations between the kernels of one lot.

(q) "abnormal external moisture" means presence of water, moisture or condensation directly on the surface of the product;

(r) "foreign smell or taste" means any odour or taste that is not characteristic of the product;

(s) "foreign matter" means any visible or apparent matter or material, including dust, not usually associated with the product, except mineral impurities.]

[72][7. CASHEW KERNELS

(1) Cashew kernels shall be obtained by roasting, shelling and peeling of the cashew nuts (*Anacardiumoccidentale*Linnaeus). The kernels shall be sound, clean, sufficiently developed and dry. Cashew kernels shall be free from any rancidity, shell liquid, foreign smell and/or taste, living insects, mites and moulds. It shall also be free from any, dead insects, rodent contamination, insect fragments and damage caused by insects, mites or other parasites visible to the naked eye.

(2) The kernels shall be of uniform and characteristic colour. They may be either in the form of whole or pieces.

(3) It shall conform to the following requirements, namely:-

Table

Sr. No.	Parameter	Limit
(i)	Moisture content, percent by mass(*Maximum*)	5.0

(ii)	Acid-insoluble ash, percent by mass, on dry basis (*Maximum*)	0.1
(iii)	Total tolerances percent by mass(Maximum)	5
	a. Superficial damage (Maximum)	2.0
	b. Immature or shrivelled (deformed) (Maximum)	2.0
	c. Speckled or spotted (black or brown) (Maximum)	0.5
	d. Presence of testa (Maximum)	2.0
	e. Insect damage (Maximum)	0.5
	f. Foreign matter (Maximum)	0.05
	g. Extraneous vegetable matter (Maximum)	1.0
(iv)	Free fatty acid (expressed as oleic acid) percent(Maximum)	1.25 For whole Kernels) 2.0 (For cut/pieces)
(v)	Peroxide value meq/kg (Maximum)	10.0

Explanations: For the purpose of this standard, the following definitions shall apply:

(i) Superficial damage: Damage adversely affecting the appearance of the product, including blemishes and areas of discoloration. Scraped kernels, where characteristic shape is not affected are not considered defective

(ii) Spotted or speckled: the presence of black or brown spots or specks.

(iii) Insect damage: Containing dead insects, mites, insect fragments, webbing, frass, excreta, or visible damage caused by boring and feeding of insects and animal parasites.

(iv) Mould: Mould filaments either on the inside or the outside of the kernel visible to the naked eye.

(v) Rancidity: Oxidation or free fatty acid production in the lipids producing a disagreeable flavour.

(vi) Foreign Matter: Any matter or material not usually associated with the product.

(vii) Testa: Skin adhering to any portion of the kernel.

(viii) Extraneous vegetable matter: Vegetative matter associated with the plant from which the product originates.

(4) The product may contain Food Additives permitted in Appendix A.

(5) The product shall conform to the microbiological requirement given in Appendix B.]

Amendment for insertion of new provision

[75][8. WALNUT KERNELS. -] (1) Walnut kernels means product obtained by deshelling nuts of varieties (cultivars) grown from *Juglansregia* L. after appropriate maturity. The kernels shall be sound, clean, sufficiently developed and dry. They shall be free from rancidity, visible mold, foreign smell and/or taste, living insects and mites. It shall also be free from dead insects, rodent contamination, insect fragments and damage caused by insects or other parasites visible to the naked eye.

2. The kernels shall be of uniform in colour (With permissible variation 15 %) with characteristic taste and flavour. It shall be free from added colour. It may be either in the form of halves or pieces. It shall conform to the following requirements:

Sr. No.	Parameter	Limit
1.	Moisture content, percent by mass (Maximum)	5.0
2.	Acid-insoluble ash, percent by mass (Maximum)	0.1
3.	Extraneous Vegetable matter, percent by mass (Maximum)	1.0
4.	Foreign Matter, percent by mass (Maximum)	0.1
5.	Damaged units, percent by mass (Maximum)	4.0
6.	Acidity of extracted fat expressed as Oleic Acid percent by mass (Maximum)	1.25

Explanations: For the purpose of this clause,

1.Extraneous vegetative matter: Vegetative matter associated with the plant from which the product originates.

2.Foreign matter: Any matter or material not usually associated with the product.

3.Damaged units: units affected by sunburn, scars, mechanical injury, discolouration or visible damage caused by boring and feeding of insects and animal parasites.

4.Mold: Mold filaments either on the inside or the outside of the kernel visible to the naked eye.

5.Rancidity: Oxidation of lipids or free fatty acid production producing a disagreeable flavour.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

2.3.48 BEAN: means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dal. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by Association of Official Analytical Chemists Maceration method.

[32][**2.3.49 SEEDLESS TAMARIND:**

1. Description: (a) Tamarind (without seed) shall be obtained from *Tamarindus indica* L. after removal of outer covering and seeds from the mature and ripe fruits.

(b) It shall be clean and will not contain deleterious substances, obnoxious odour, external moisture and inorganic extraneous matter.

(c) It shall be free from insect infestation, live or dead insects, mould growth, rodent hair and excreta, added colouring matter and impurities of animal origin.

(d) It shall also conform to the following standards, namely:-

S.No	Characteristics	Requirements (in per cent.)
1.	Moisture content	Not more than 20.0
2.	Organic extraneous matter (w /w)	Not more than 5.0
3.	Total Ash w /w (on dry basis)	Not more than 6.0
4.	Acid Insoluble ash w/w (on dry basis)	Not more than 1.0
5.	Crude fibre w/w (on dry basis)	Not more than 9.0
6.	Tamarind seeds	Not more than 0.5

2. Food additives:
The product may contain food additives specified in Appendix A to these regulations.

3. Contaminants, toxins and residues:

The product shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

4. Hygiene:
(a) The products shall be prepared and handled in accordance with the guidelines specified in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such other guidelines as specified from time to time under the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement specified in Appendix B.

5. Labelling:
For labelling of the product, the provisions of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 shall apply.

6. Methods of sampling and analysis:
The method for sampling and analysis of the product shall be as specified in theFood Safety and Standards Authority of India Manual of Method of Analysis of Food.

2.3.50 VANILLA

1. Description:- Vanilla in the form of pods, cut or powder means product obtained from species of *Vanilla fragrans* (Salisbury) Ames, syn *Vanilla planifolia* Andrews.

(a) **(i) "Vanilla pods"** means whole pods which may be split.

(ii) The pods shall be sound, dry or wooded, of typical flavour, reddish in colour and which may have few to several stains, the total length of which doesnot exceed half the length of the pod.

(iii) It shall not be insect infested, mouldy, creosoted, blistered or oxidized and free from bird and rodent damage.

(iv) The product may not have undergone any treatment which could inducea change in their natural vanillin content or in the content of any other constituent of the flavour.

(b) **(i) "Cut vanilla"** means parts of pods, split or not, and deliberately cut or broken.

(ii) It shall not be insect infested, mouldy, creosoted, blistered or oxidized and free from bird and rodent damage.

(iii) The product may not have undergone any treatment which could induce a change in their natural vanillin content or in the content of any other constituent of the flavour.

(c) **(i) "Vanilla Powder"** shall be obtained by grinding the vanilla pods or cut vanilla meeting the specified requirements.

(ii) It shall be clean, have natural flavour of vanilla and shall be sufficiently fine to pass through a sieve of aperture size 1.25 mm.

(iii) The product may not have undergone any treatment which could induce a change in its natural vanillin content or in the content of any other constituent.

(d) The product shall be free from added colour, undesirable taste, or any extraneous matter and shall conform to the following standards, namely: ―

Sl. No.	**Characteristics**	**Requirements**		
		Vanilla pods	**Cut vanilla**	**Vanilla powder**
1.	Moisture % (Maximum)	30.0	30.0	20.0
2.	Vanillin Content % (on wet basis)(Minimum)	2.0	2.0	2.0
3.	Total ash % (on dry basis)(Maximum)	5.0	5.0	5.0
4.	Acid Insoluble ash % (on dry basis)(Maximum)	1.0	1.0	1.0
5.	Colour	Dark chocolate brown to reddish in colour	Dark chocolate brown to reddish in colour	Dark chocolate brown to reddish in colour

2. Food additives:

The product may contain Food Additives permitted in Appendix A.

3. Contaminants, toxins and residues:

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

4. Food hygiene:

(a)The products shall be prepared and handled in accordance with the guidance provided in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

5. Labelling:

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

6. Method of analysis:

The product shall be analysed as provided in the relevant Food Safety and Standards Authority of India Manual of Method of Analysis of Food.

2.3.51 COCONUT MILK (NON-DAIRY)

1. Description:- Coconut milk is the product prepared by :—

(a) using a significant amount of separated, whole, disintegrated, macerated or comminuted fresh endosperm (kernel) of coconut palm (*Cocos nucifera* L.) and expelled, where most filterable fibres and residues are excluded;

(b) reconstituting coconut cream powder with potable water; or

(c) dispersing finely comminuted dehydrated coconut endosperm with potable water; or

(d) combining any of the above;

[59][(e) Coconut water, Maltodextrin and Sodium caseinate may be added. The product shall have characteristic colour, flavor and odour of the products. It may be processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.]

2. Styles:- (a)The product shall be any of the following styles: —

(i) **light coconut milk-** light coconut milk shall be the product obtained from either the bottom portion of centrifuged coconut milk or by further dilution of coconut milk.

(ii) **coconut milk-** coconut milk is the dilute emulsion of comminuted coconut endosperm (kernel) in water with the soluble and the suspended solids distributed.

(b) The product shall conform to the following standards, namely:-

S. No.	Characteristics	Requirements	
		Light coconut milk	**Coconut milk**
1.	Moisture % (w/w) (Maximum)	93.4	87.3
2.	Total Solids % (w/w)	6.6 - 12.6	12.7-25.3
3.	Solids Not-Fat% (w/w) (Minimum)	1.6	2.7
4.	Fat % (w/w) (Minimum)	5.0	10.0
5.	pH (Minimum)	5.9	5.9

(c) The hermetically sealed container should be well filled with the product, and it should occupy not less than 90 per cent. v/v of the water capacity of the container, which shall be the volume of distilled water at 20^{o}C which the sealed container will hold when completely filled.

3. Food additives:

The product may contain food additives permitted in Appendix A.

4. Contaminants, toxins and residues:

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Food hygiene:

(a) The products shall be prepared and handled in accordance with the guidance provided in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

6. Labelling:

The product covered by this Standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

7. Method of analysis

The product shall be analysed as provided in the relevant Food Safety and Standards Authority of India Manual of Method of Analysis of Food.

2.3.52 COCONUT CREAM (NON-DAIRY)

1. Description: Coconut cream is the product prepared by:—

(a) using a significant amount of separated, whole, disintegrated, macerated or comminuted fresh endosperm (kernel) of coconut palm (*Cocos nucifera* L.) and expelled,where most filterable fibres and residues are excluded;

(b) reconstituting coconut cream powder with potable water; or

(c) dispersing finely comminuted dehydrated coconut endosperm with potable water; or

(d) combining any of the above;

[59][(e) Coconut water, Maltodextrin and Sodium caseinate may be added. The product shall have characteristic colour, flavor and odour of the products. It may be processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.]

2. Styles: (a)The product shall be any of the following styles: —

(i) **Coconut cream-**Coconut cream is the emulsion extracted from matured endosperm (kernel) of the coconut fruit with or without any addition of coconut water or water;

(ii) **Coconut cream concentrate-** Coconut cream concentrate is the product obtained after the partial removal of water from coconut cream.

(b) The product shall conform to the following standards, namely:—

S. No	Characteristics	Requirements	
		Coconut cream	Coconut cream concentrate
1.	Moisture % (w/w) (Maximum)	74.6	62.6
2.	Total Solids % (w/w)	25.4 - 37.3	Min 37.4
3.	Solids NotFat% (w/w) (Minimum)	5.4	8.4
4.	Fat % (w/w) (Minimum)	20.0	29.0
5.	pH (Minimum)	5.9	5.9

(c) The hermetically sealed container should be well filled with the product, and it should occupy not less than 90 per cent. v/v of the water capacity of the container, which shall be the volume of distilled water at 20^{o}C which the sealed container shall hold when completely filled.

3. Food additives:

The product may contain food additives permitted in Appendix A.

4. Contaminants, toxins and residues:

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Food hygiene:

(a) The products shall be prepared and handled in accordance with the guidance provided in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

6. Labelling:

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

7. Method of analysis:

The product shall be analysed as provided in the relevant Food Safety and Standards Authority of India Manual of Method of Analysis of Food.

2.3.53 DRIED APRICOTS

1. Description- (a) **"**Dried apricots" means product prepared from sound ripe fruit of varieties of *Armeniaca vulgaria* Lam. (*Prunus armeniaca* L.) and processed by sun drying or by other methods of dehydration.

(b) The product shall have colour characteristic of the variety and the type of treatment and shall have flavour and odour characteristic of the product.

(c) The product shall be free from living insects or mites and reasonably free from extraneous vegetable matter, insect debris and other objectionable matter.

2. Styles: (a)The product shall be presented in one of the following styles: **—**

(i) whole, unpitted;

(ii) whole, pitted;

(iii) halves; or

(iv) slabs - consisting of portions of sound, ripe apricots of characteristic colour, irregular in shape, size and thickness and excluding whole fruit.

(b) It shall also conform to the following standards, namely:**—**

S.No	Characteristics	Requirement
1.	Moisture Content % (w/w) (Maximum)	

	a) Dried apricots not treated with any preservatives.	20.0	
	b)Dried apricots treated with permitted preservatives.	25.0	
2.	Defects for Styles (i)a , (i)b and (i)c		
	(a) Slabs % (w/w) (Maximum)	10.0	Total shall Not be more than 15.0 per cent (w/w).
	(b) Damaged fruits % (w/w) (Maximum)	10.0	
	(c) Broken fruits % (w/w) (Maximum)	10.0	
	(d) Insect damaged and dirty fruits % (w/w) (Maximum)	5.0	
	(e) Mouldy fruit % (w/w) (Maximum)	1.0	
	(f) Immature fruits % (w/w) (Maximum)	10.0	

(c) **Definitions:**

(i) **"Damaged fruit"** means fruit affected by any damage or blemish on the surface resulting from factors such as hail, etc., affecting more than 5 mm^2 of fruit surface.

(ii) **"Broken fruit"** means fruit affected by any damage resulting from improper halving or other mechanical action.

(iii) **"Immature fruit"** means fruit which is generally deficient in sugar and may be sour in taste.

(iv) **"Insect damaged fruit"** means fruit which is affected by insect damage or containing dead insects, mites or other pests.

(v) **"Mouldy fruit"** means fruit which is affected by mould to a visible extent, or decay.

(vi) **"Dirty fruit"** means fruit affected by imbedded dirt or any other foreign material.

3. Food additives:

The product may contain food additives permitted in Appendix A.

4. Contaminants, toxins and residues:

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

5. Food hygiene:

(a) The products shall be prepared and handled in accordance with the guidance provided in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

6. Labelling:

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 and in addition, the name of style of product shall be labelled on the product.

7. Method of analysis:

The product shall be analysed as provided in the relevant Food Safety and Standards Authority of India Manual of Method of Analysis of Food.

2.3.54 COCOA BEANS

1. Description: (a) **"**Cocoa bean" means the properly fermented and dried whole seeds of tree *Theobroma cacao* Linnaeus.

(b)The product shall be free from any abnormal or foreign odour or flavor and admixture of any other seeds.

(c) It shall be reasonably free from broken beans, fragments and pieces of shell and the product shall be free from living insects.

(d) The product shall conform to the following requirements, namely:-

S.No.	Characteristics	Requirements
1.	Moisture content % (Maximum)	8
2.	Moldy Beans % by count (Maximum)	4
3.	Slaty beans % by count (Maximum)	8
4.	Insect damaged % by count (Maximum)	2
5.	Germinated and flat beans % by count (Maximum)	4

(e) **Definitions:**

(i) **"Moldy beans"** include beans on internal parts of which mould is visible to the naked eyes.

(ii) **"Slaty beans"** include beans which show a slaty colour over half or more of the surface exposed.

(iii) **"Insect damaged"** include beans, the internal parts of which contain insects at any stage of development or which have been damaged beans, attacked by insects causing damage visible to the naked eyes.

(iv) **"Germinated beans"** include beans which have been pierced, slit or broken by the seed germ.

(v) **"Flat beans"** means beans of which the cotyledons are so thin that it is not possible to obtain a cotyledons surface by cutting.

(vi) **"Broken Beans"** means beans of which a fragment equivalent to less than half the bean is missing.

(vii) **"Fragments"** include pieces equal to or less than half bean.

(viii) **"Piece of shell"** part of the shell without any of the kernel.

(ix) **"Smoky bean"** means cocoa bean which has a smoky smell or taste or which shows signs of contamination by smoke.

2. Food additives:

The product may contain Food Additives permitted in Appendix A.

3. Contaminants, toxins and residues:

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

4. Hygiene:

(a) The products shall be prepared and handled in accordance with the guidance provided in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

5. Labelling:

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

6. Method of analysis:

The product shall be analysed as provided in the relevant Food Safety and Standards Authority of India Manual of Method of Analysis of Food.

2.3.55 ARECANUTS OR BETELNUTS OR SUPARI

1. Description: (a) "Arecanuts" or "Betelnuts" or "Supari" means nuts obtained from Areca Palm (*Areca catechu* L.).

(b) The product shall be dry, well matured, sound, clean, whole or cut, fully dehusked, uniform in colour, i.e., bright shining to dull red colour.

(c) It shall be free from synthetic colouring matter and shall be free from insect infestation, visible moulds, fissures and shrinkage and shall not be hollow.

(d) The product shall not have any off flavour, odour or other undesirable characteristics and shall also conform to the following standards, namely: —

S.No.	Characteristics	Requirements
1.	Moisture % (Maximum)	7
2.	Damaged Nuts % (by weight) (Maximum)	12
a)	For whole nuts or supari (Damaged nuts include blemish or cracked nuts, broken nuts, nuts not fully dehusked and those the pith of which is black)	
b)	For cut nuts or supari (Damaged nuts include blemish/cracked nuts, nuts not fully dehusked and those the pith of which is black)	
3.	Damaged by moulds and insects % (by weight) (Maximum)	3

2. Food additives:

The product may contain food additives permitted in Appendix A.

3. Contaminants, toxins and residues:

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

4. Food hygiene:

(a) The product shall be prepared and handled in accordance with the guidance provided in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirements given in Appendix B.

5. Packaging and labelling:

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

6. Method of analysis:

The product shall be analysed as provided in the relevant Food Safety and Standards Authority of India Manual of Method of Analysis of Food.']

[56][**2.3.56: Date Paste**

1. Description.-

(a) Date paste means product prepared from fruits of the date palm (*Pheonix*) that are sound, consistent in colour and texture, harvested at the stage of maturity, washed, pitted and capped.

(b)Dates used for making date paste shall be free from diseases and contain no parthenocarpic or unripe fruits. They shall be free from fermentation and mould, insects or insect fragments, eggs, larvae, dirt and foreign matter.

(c) Date paste shall be soft and have no alteration in smell and flavor.

(d) It shall not contain whole or broken pits, stalks or extraneous fragments.

(e)The product shall be made from single variety of dates or a blend of several varieties of dates.

(f) It shall also conform to the following standards, namely:-

S.No	Characteristics	Requirements (in per cent.)
1.	Moisture % by weight	Not more than 20.0
2.	Total ash % by weight	Not more than 1.2
3.	Acid insoluble ash % by weight	Not more than 0.1

2. Food Additives.-No additives are allowed in the product.

2.3.57:Fermented Soybean Paste

1. Description.-Fermented Soybean Paste is a fermented food whose essential ingredient is soybean from which trypsin inhibitor has been inactivated. The product is a paste type which has various physical properties such as semi-solid and partly retained shape of soybean.

2. Essential Composition and Quality Factors.-

(A) Composition:

(i) Basic Ingredients,-

(a) Soybean;

(b) Salt;

(c) Water;

(d) Naturally occurring or cultivated microorganisms (Bacillus spp. and/or Aspergillus spp., which are not pathogenic and do not produce toxins).

(ii) Optional Ingredients,-

(a) Grains and/or Flour as defined in sub-regulation 2.4 of Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011;

(b) Yeast and/or yeast extracts;

(c) *Lactobacillus* and/or *Lactococcus;*

(d) Distilled ethyl alcohol derived from agricultural products;

(e) Nutritive sugars including honey as defined in sub-regulation 2.8 of Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011;

(f) Starch syrup;

(g) Permitted Natural flavouring materials.

(B) Quality Factors:

(i) The product shall have the flavour, odour, colour and texture characteristic of the product. It shall conform to the followings

S.No	**Characteristics**	**Limits**	
		Fermented soybean paste manufactured with soybean only	**Fermented soybean paste manufactured with soybean and grains**
1.	Moisture % by weight (maximum)	60.0	
2.	Total nitrogen % by weight (minimum)	1.6	0.6
3.	Amino nitrogen % by weight (minimum)	0.3	0.12

(ii) Minimum Fill.-The container should be well filled with the product which should occupy not less than ninety percent. (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 value of distilled water at 20ºC which the sealed container will hold when completely filled.

2.3.58: Harrisa (Red Hot Pepper Paste)

1. Description.-(a)Harissa or Red Hot Pepper Paste means the preserved pulp of fresh red hot pepper of the *Capsicum annuum* variety, concentrated and preserved using thermal treatment only.

(b) The product shall contain fresh red hot peppers of the *Capsicum annuum* variety, fresh garlic, coriander, caraway and salt. The peppers used in the preparation shall be sufficiently ripe, wholesome, free of spoilage, rot and impurities and free of insects.

(c) The taste shall be typical to the product, spicy (hot), free from bitterness or burned taste or any other foreign taste. The smell shall be typical of the product and free of foreign smells.

(d) The final product shall be free of crusts and seeds using a 2 mm sieve.

(e) It shall also conform to the following standards, namely:-

S.No.	Characteristics	Requirements (in per cent.)
1.	Total acidity % by weight (expressed as citric acid) of total dry residue	Not more than 3.6
2.	Dry extract % by weight (of total soluble solids excluding salt)	Not less than 14.0
3.	Added salt % by weight(on dry weight basis)	Not more than 1.5
4.	Acid insoluble ash% by weight(of total weight of dry extract)	Not more than 0.15

(f) The container should be well filled with the product, which should occupy not less than ninety percent. (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 temperature, which the sealed container will hold when completely filled. Flexible containers should be filled as full as commercially practicable.

2. Food Additives.-No additives are allowed in the product covered by this Standard.

2.3.59: Vegetable Protein Products

1. Description.-

(a) Vegetable Protein Products means the food products produced by the reduction or removal of the major non-protein constituents (water, oil, starch, other carbohydrates) from vegetable materials other than single cell protein sources in a manner to achieve protein content forty percent. or more.

(b) It shall be prepared from clean, sound, plant material, free from foreign matter or from Vegetable Protein Products of lower protein content meeting the specifications contained in this standard.

(c) Carbohydrates including sugars, edible fats and oils covered under Food Safety and Standards (Food Products and Additives) Regulations, 2011, other protein products, vitamins and minerals, salt, herbs and spices may be added as optional ingredients.

(d) It shall also conform to the following standards, namely:-

S.No	Characteristics	Requirements (in per cent.)
1.	Moisture content	Not more than 10.0
2.	Crude Protein (N 6.25) (on dry weight basis)	Not less than 40.0
3.	Total Ash (on dry weight basis)	Not more than 10.0

4.	Residual Fat (by weight)	Compatible with GMP
5.	Crude Fibre (on dry weight basis)	Not more than 10.0

2.3.60 Quick Frozen Fried Potatoes

1. Description

Quick Frozen Fried Potatoes are the product prepared from clean, sufficiently developed, sound tubers of the potato plant of the species *Solanum tuberosum* L.,*Solanum Andigena* L.and rhizomes of the sweet potato of the species *Ipomoea batatas*. They shall have been sorted, washed, peeled or unpeeled, cut into strips, and treated as necessary to achieve satisfactory colour and fried or precooked in edible oil or fat prescribed under Food Safety and Standards (Food Products and Additives) Regulations, 2011 or water blanched. The treatment, precooking and frying operations shall be sufficient to ensure adequate stability of colour and flavour. The product is subjected to a freezing process in appropriate equipment until its temperature has reached -18^{o}C at the thermal centre after thermal stabilization.

Sugars (sucrose, invert sugar, dextrose, fructose, glucose syrup, and dried glucose syrup), salt (Sodium Chloride), spices, herbs and condiments and batters may be added as optional ingredients.

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

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

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

(c) **Other Styles-**Any other presentation of the product, distinctive from above two styles to be adequately described on the label.

Dimension of Cross Section: The cross sectional dimensions of strips of quick frozen fried potatoes which have been cut on all four sides shall be uniform and not be less than 4 mm when measured in the frozen condition.

Designation	**Dimension in mm across the largest cut surface**
Shoestring	4 upto 8
Medium	more than 8 upto12
Thick cut	more than 12 upto 16
Extra large	more than 16

A tolerance of 10% by length of non-conforming styles units applies, when specific lengths are not indicated. The product shall conform to the following requirements:

S.No	Characteristics	Requirements
1.	Moisture content % (m/m) (Maximum)	78.0
2.	Free Fatty Acid content in the oil extracted % (m/m as oleic acid) (Maximum)	1.5
3.	Frying defects(burnt pieces-any unit which is dark brown to black) % (m/m) (Maximum)	0.5

2.3.61 Canned Chestnuts and Canned Chestnut Puree

1. Description

(a)Canned chestnuts is the product (i) prepared from fresh, sound, mature chestnuts of varieties conforming to the characteristics of the species *Castaneacrenata* Sieb et Zucc. (Japanese chestnut) or *Castanea sativa* Miller (European chestnut) which shall be shelled and may be pellicled or unpellicled; (ii) packed with or without water which may or may not contain sugars, seasonings and other ingredients appropriate to the product; and (iii) processed by heat in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.

It may contain "salt" (sodium chloride) in an amount not exceeding 1 percent of total net contents.

(b) Canned chestnut puree is the product (i) pureed by sieving, or other mechanical means in order to obtain a fruit pulp from chestnuts, as defined at (a) (i) above; (ii) packed with or without sugars and other ingredients appropriate to the product; and (iii) heat processed by a procedure as defined above in (a) (iii).

It may contain "sugars", as listed in 3(i) (b). They shall amount to not more than 2 percent of total net contents. It may contain "salt" (sodium chloride) in an amount not exceeding 1 percent of total net contents.

2. Styles

(i) Canned Chestnuts.- Canned chestnuts may be packed in the following styles:-

(a) Whole - whole chestnuts which are pellicled or unpellicled and/or trimmed into a practical tetrahedron.

(b) Brokens - small pieces which may not be uniform in size and/or shape.

(ii) Canned Chestnut Puree

(a)Sweetened - with added sugars; not less than 12 percent total soluble solids (12° Brix).

(b)Unsweetened - without added sugars; not less than 10 percent total soluble solids (10° Brix).

(iii) Other Styles

The product may be presented in any other presentation provided it:

(a) is sufficiently distinctive from other forms of presentation laid down in this standard;

(b)meets all other requirements of this standard; and

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

3. Essential Composition & Quality Factors

(i) Packing Media.- Where a packing medium is used, it may consist of:

(a) Water - in which water is the sole packing medium;

(b) Water which may have one or more of the following nutritive sweeteners as prescribed in Food Safety & Standards (Food Product Standards and Food Additives) Regulation, 2011: sucrose, invert sugar syrup, dextrose, dried glucose syrup, glucose syrup, fructose, fructose syrup, honey.

(c) Brine- Water in which common salt is added.

(ii) Classification of packing media when nutritive sweeteners are added

When nutritive sweeteners are added to water, the liquid media shall be classified on the basis of the cut-out strength as follows:

Slightly sweetened water/ Extra light syrup	Not less than 10° Brix but less than 14° Brix
Light syrup -	Not less than 14° Brix but less than 18° Brix
Heavy syrup -	Not less than 18° Brix but less than 22° Brix
Extra Heavy syrup -	Not less than 22° Brix

The cut-out strength for any packing medium shall be determined on average, but no container may have a Brix value lower than that of the next category below.

(iii) Quality Criteria

(a) **Colour:** When colour is not added, canned chestnuts or canned chestnut puree shall have a normal colour characteristic of the varieties used. Browning and discolouration shall be regarded as defects.

(b) **Flavour:** Canned chestnuts or canned chestnut puree shall have a normal flavour and odour free from flavours and odours foreign to the products.

(c) **Texture**: Canned chestnuts shall have a reasonably uniform thick texture and shall not be excessively firm nor unreasonably soft. Canned chestnut puree shall have a uniform consistency and particle size.

(d) **Uniformity of size** : Whole - in 95 percent, by count, of units that are most uniform in size, the weight of the largest unit shall be no more than twice the weight of the smallest unit.

(iv) Defects and Allowances

The products shall be substantially free from defects such as harmless plant material, shell, pellicle (in pellicled styles), blemished units, split and broken units (in whole styles) and discoloured units. Slight syneresis in canned chestnut puree should not be regarded as a defect. Certain common defects shall not be present in amounts greater than the following limitations:

-Not more than 14 percent by mass of chestnuts on the net drained weight; and

-Not more than 20 percent of chestnuts which are not whole on the net drained weight for the style "whole".

(v) Minimum Fill

The container shall be well filled with chestnuts or chestnut puree and the product (including packing medium) 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 20°C which the sealed container will hold when completely filled.

(vi) Minimum Drained Weight

The drained weight of the product packed with liquid packing medium shall be not less than the following percentages, calculated on the basis of the weight of distilled water at 20□C which the sealed container will hold when completely filled:

- Not less than 300 ml of water capacity of the container 60%
- Less than 300 ml of water capacity of the container 55%

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.

4. Food Additives.-No additives are allowed in the product covered by this Standard.

5. Labelling

The product covered by this Standard shall be labelled in accordance with the Food Safety and Standards (Packaging & Labelling) Regulation, 2011. In addition the name of packing media shall be declared as part of the name or in close proximity thereto, as:

(i) when the packing medium is composed of water, the packing medium shall be declared as:

"In water" or "Packed in water".

(ii) When nutritive sweeteners are added to water, the packing medium shall be declared as:

"Slightly Sweetened Water/ Extra Light Syrup"

or

"Light Syrup"

or

"Heavy Syrup"

or

"Extra Heavy Syrup"

(iii) When salt is added to water, the packing medium shall be declared as: "Brine"

2.3.62 EDIBLE FUNGI PRODUCTS

1. Description

Edible Fungi Products means products prepared from fresh edible fungi. The products may be dried edible fungi (including freeze-dried fungi, fungi grits, fungi powder), pickled fungi, salted fungi, fermented fungi, fungi in vegetable oils, quick frozen fungi, sterilized fungi, fungi extract, fungi concentrate and dried fungi concentrate.

Edible fungi products shall be clean, undamaged, free, as far as possible, of maggot damage and possess the flavour and taste appropriate to the species.

Edible Fungi products may contain salt (sodium chloride), vinegar, spices and herbs, sugars (any carbohydrate sweetening matter), refined edible vegetable oil, refined edible animal fat, butter, milk, milk powder, cream, water or any other suitable ingredients whose standards are prescribed in Food Safety & Standards (Food Product Standards and Food Additives) Regulations, 2011.

2. General Requirements

(i) Styles

(A) The products may be presented in various styles, e.g. whole with stalks, whole caps(buttons) without stalks, slices, pieces and stalks, grits, powder or concentrate.

(B) Other Styles.- The product may be presented in any other presentation provided it:

(a) is sufficiently distinctive from other forms of presentation laid down in this standard;

(b) meets all relevant requirements of this standard, including requirements relating to limitations on defects, drained weight, and any other requirements in this standard which are applicable to that style in the standard which most closely resembles the style or styles intended to be provided for under this provision;

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

(ii) Composition

Except in the case of fungi products consisting entirely of caps or where the addition of stalks is stated on the label in accordance with the labelling provisions, the number of stalks shall not exceed the number of caps.

3. Specific Requirements

(i) Dried fungi means the product obtained by drying edible fungi of one species, whether whole or sliced. It shall conform to the following requirements:

S.No	Requirements	Limits
1	Water Content % m/m (Maximum)	
	a. Freeze-dried fungi	6.0
	b. Dried (other than freeze-dried) fungi	12.0
	c. Dried fungi Shii-ta-ke	13.0
2	Mineral impurities % m/m (Maximum)	2.0
3	Organic impurities of vegetable origin % m/m (Maximum) except for Shii-take mushrooms.	0.02
	Shii-take mushrooms	1.0
4	Content of maggot damaged fungi % m/m(Maximum)	
	a. Fungi	1.0 % of total damage including not more than 0.5 % serious damage.
	b. Crushed fungi	6.0
	c. Carbonized fungi	2.0
	d. Damaged fungi	20.0

(ii) Fungi Grits & Fungi Powder

Fungi grits means coarsely ground dried edible fungi of one species. Fungi Powder means dried edible fungi of one species ground so finely as to allow the powder to pass through a sieve having a 200 microns mesh.It shall conform to the following requirements:

S.No	Requirements	Limits
1	Water Content % m/m(Maximum)	
	a. fungi grits	13.0

	b. fungi powder	9.0
2	Mineral impurities % m/m (Maximum)	2.0

(iii) Pickled Fungi means fresh or previously preserved edible fungi of one or more species appropriately prepared after previous cleaning, washing and blanching, soaked in vinegar and with or without the addition of salt, spices, sugars, vegetable oils, acetic, lactic, citric or ascorbic acid, and then pasteurized in hermetically sealed containers. It shall conform to the following requirements:

S.No	**Requirements**	**Limits**
1	Salt (sodium chloride) % m/m(Maximum)	2.5
2	Sugars % m/m (Maximum)	2.5
3	Vinegar (expressed as acetic acid) % m/m (Maximum)	2.0
4	Mineral impurities % m/m(Maximum)	0.1
5	Organic impurities of vegetable origin % m/m (Maximum)	0.02
6	Content of maggot damaged fungi % m/m(Maximum)	1.0% of total damage including not more than 0.5 % serious damage

(iv)Fermented Fungi means fresh edible fungi of one species preserved by salt and by lactic acid fermentation. It shall conform to the following requirements:

S.No	**Requirements**	**Limits**
1	Lactic acid, (naturally occurring) % m/m (Minimum)	1.0
2	Salt (sodium chloride) % m/m	3.0-6.0
3	Mineral impurities % m/m(Maximum)	0.2
4	Organic impurities of vegetable origin % m/m(Maximum)	0.1
5	Content of maggot damaged fungi % m/m (Maximum)	4.0

(v) Fungi in Olive Oil and other Vegetable Oils means edible fungi either fresh or previously salted, of one species, whole or sliced, packed in airtight containers in olive oil or other edible vegetable oil and heat treated to a degree to ensure the resistance of the product to spoilage. It shall conform to the following requirements:

S.No	Requirements	Limits
1	Salt (sodium chloride) % m/m(Maximum)	1.0
2	Mineral impurities %m/m (Maximum)	0.1
3	Organic impurities of vegetable origin % m/m (Maximum)	0.02
4	Maggot damaged fungi % m/m (Maximum)	1.0 % of total damage including not more than 0.5 % serious damage

(vi) Quick Frozen Fungi means fresh edible fungi of one species which, after cleaning, washing and blanching, are subjected to a freezing process in appropriate equipment. 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 -18oC (0oF) at the thermal centre after thermal stabilization. It shall conform to the following requirements:

S.No	Requirements	Limits
1	Mineral impurities % m/m (Maximum)	0.2
2	Organic impurities of vegetable origin % m/m (Maximum)	0.02
3	Maggot damaged fungi % m/m (Maximum)	1.0 % of total damage including not more than 0.5 % serious damage

(vii) Sterilized Fungi means edible fungi, either fresh, salted or frozen, of one or more species, whole or sliced, packed in airtight containers in water and salt, and heat treated to a degree to ensure the resistance of the product to spoilage. It shall conform to the following requirements:

S.No	Requirements	Limits
1	Salt (sodium chloride) % m/m(Maximum)	2.0

2	Mineral impurities % m/m (Maximum)	0.2
3	Organic impurities of vegetable origin % m/m (Maximum)	0.02
4	Maggot damaged fungi % m/m (Maximum)	1.0 % of total damage including not more than 0.5 % serious damage.

(viii) Fungi Extract and Fungi Concentrate

Fungi Extract means a product concentrated from fresh edible fungi juice or from dried fungi water of edible fungi of one or more species with the addition of salt and which is concentrated to 7% of saltless extract.

Fungi concentrate means a product concentrated from fresh edible fungi juice or from dried fungi water of edible fungi of one or more species with the addition of salt and which is concentrated to 24% of saltless extract. It shall conform to the following requirements:

S.No	Requirements	Limits
1	Salt (sodium chloride) % m/m(Maximum)	20.0
2	Mineral impurities	none
3	Organic impurities of vegetable origin	none

(ix) Dried Fungi Concentrate means the dried product obtained from fungi extract or fungi concentrate. It shall conform to the following requirements:

S.No	Requirements	Limits
1	Water Content % m/m(Maximum)	9.0
2	Salt (sodium chloride) % m/m(Maximum)	5.0
3	Mineral impurities	none
4	Organic impurities of vegetable origin	none

(x) Salted Fungi (semi-processed product) means fresh edible fungi of one species, either whole or sliced, preserved in brine after previous cleaning, washing and blanching. It shall conform to the following requirements:

S.No	Requirements	Limits
1	Salt (sodium chloride) % m/m	15.0-18.0
2	Mineral impurities % m/m (Maximum)	0.3
3	Organic impurities of vegetable origin % m/m (Maximum)	0.05
4	Maggot damaged fungi % m/m (Maximum)	1.0% of total damage including not more than 0.5% serious damage

4. Definition of Defects

a. ***Damaged fungi*** means fungi with more than quarter of the cap missing.
b. ***Carbonized fungi*** means whole or cut dried fungi with traces of carbonization on their surface
c. ***Crushed fungi*** means parts of fungi passing through a sieve having a 15 x 15 mm mesh for fresh fungi and a 5 x 5 mm mesh for dried fungi.
d. ***Spoiled fungi*** means fungi which are brownish or rotten as a result of attack by microorganisms and/or mould.
e. ***Maggot damaged fungi*** means fungi having holes caused by maggots.
f. ***Seriously maggot damaged fungi*** means fungi having four or more holes caused by maggots.
g. ***Fallen off stalks*** means stalks separated from the caps.
h. ***Organic impurities of vegetable origin*** means admixtures of other edible fungi, parts of plants such as leaves and pine needles.
i. ***Mineral impurities*** means those substances which, after ashing, remain as insoluble residues in hydrochloric acid.

5. Labelling

The product covered by this Standard shall be labelled in accordance with the Food Safety and Standards (Packaging & Labelling) Regulation, 2011. In addition the following shall be declared as part of the name or in close proximity thereto, as:

(i) The terms "fungi" may be replaced by the terms genus or species, e.g. "mushroom" or "mushrooms" for the genus *Agaricus*. The method of processing to which the product has been subjected, e.g. "dried", "sterilized" or "quick-frozen", shall be indicated on the label.

(ii) In the case of dried, salted, quick-frozen, fermented, pickled and canned fungi, the common name of the species of fungi shall be stated in addition to the word "fungi". The scientific name of the species shall also be stated.

(iii) In the case of fungi products consisting of more than one species of fungi, the word "mixed" shall be indicated on the label.

(iv) In the case of fungi products made from fungi other than fresh fungi, there shall be a statement on the label indicating the method of processing to which the fungi used in the preparation of the final product have been subjected.

(v) Where salted fungi are used for the preparation of other fungi products, there shall be a statement on the label indicating that salted fungi have been used.

(vi) If stalks have been added to fresh fungi or fungi products, the words "stalks added" shall appear on the label.]

[66]**[2.3.63. COCONUT MILK POWDER** . - (1) "Coconut milk powder" means dehydrated or spray dried product obtained by removal of water from the coconut milk obtained from fresh, wholesome kernels of the fruits of coconut palm (*Cocosnucifera*L.), maltodextrin and sodium caseinate may be added to the product.

(2) It shall have flavour and odour characteristic of the products and shall be smooth and free flowing in texture and creamish to white or off white in colour.

(3) The product shall be free from added colouring or flavouring matter.

(4) The product shall conform to the following requirements, namely: -

Sl.No.	**Characteristics**	**Requirements**
(i)	Moisture, (m/m), per cent	Not more than 2.5
(ii)	Fat, on dry basis(m/m), per cent	Not less than 60.0
(iii)	FFA (of extracted fat as lauric acid) ,(m/m), per cent	Not more than 0.2
(iv)	Bulk Density g/ml	0.3-0.45]

[72]**[2.3.64 WATER CHESTNUT FLOUR (SINGHARE KA ATTA). -**

(1) Water Chestnut flour means the product obtained by grinding clean, sound and dried nuts of *Trapabispinosa* or *Trapaquadrispinosa*species commonly known as Singhara. It shall be white in colour, and shall be free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely: —

Table

S.No.	Characteristics	Requirements
1.	Moisture % (m/m), Maximum	12.0
2.	Alcoholic acidity % (with 90 per cent alcohol) expressed as H_2SO_4 (on dry basis), Maximum	0.18
3.	Ash insoluble in dilute HCl % (m/m), Maximum	0.5

4.	Protein content % (m/m) on dry basis, Minimum	9.0
5.	Uric acid	100 mg/kg

(2) The product may contain food additives permitted in Appendix A.

(3) The product shall conform to the microbiological requirement given in Appendix B.

2.3.65 Colouring Foods

(1) Colouring foods, means product obtained from the fruits, vegetables, spices and herbs with aqueous extraction which are normally consumed as such or normally used as a characteristic ingredient of food. It shall be prepared without a selective extraction of pigments in dried or in the concentrated form. It shall retain their essential characteristics and shall be used as ingredients in food products for the primary function of colouring. It shall have characteristic colour, taste, odour to the source material.

(2) It may include nutritive sugars not exceeding 20% by weight of the final product in case of liquid and maltodextrin in case of powder to make the product stable.

(3) It shall conform to the following requirements, namely: -

Table

Requirements	Liquid	Powder
Total solids (g/100g) Min	45	90
Marker Pigment % Min	0.5	1.0

(4) The product may contain Food Additives permitted in Appendix A.

(5) The product shall conform to the microbiological requirement given in Appendix B.]

2.4 CEREALS AND CEREAL PRODUCTS

2.4.1 ATTA

1. Atta or resultant atta means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta It shall conform to the following standards: —

Moisture	Not more than 14.0 per cent (when determined by heating at 130-133^{o}C for 2 hours).
Total ash	Not more than 2.0 per cent (on dry weight basis)
Ash insoluble in dilute HCl	Not more than 0.15 percent (on dry weight basis).
Gluten (on dry weight basis)	Not less than 6.0 per cent

Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent

It shall be free from rodent hair and excreta

2. [70][****]

3. **Protein rich (paushtik) atta** means the product obtained by mixing wheat atta with groundnut flour "or soya flour", or a combination of both". flour up to an extent of 10.0 per cent. Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under 2.4.13 (1). It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter. It shall conform to the following standards:—

Moisture	Not more than 14.0 per cent
Total ash	Not more than 2.75 per cent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Total Protein (N x 6.25)	Not less than 12.5 percent on dry basis
Crude Fibre	Not more than 2.5 per cent on dry basis
Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4	Not more than 0.12 per cent

It shall be free from Rodent hair and excreta

Amendment for substitution of highlighted provision

[77][3. Protein rich wheat flour (Protein prachur *atta*)

1. Protein rich wheat flour (Protein prachur *atta*) means the product obtained by mixing wheat flour with Solvent extracted groundnut flour, Solvent extracted Soya flour and Whey Protein powder and other edible standardised flour as mentioned in regulations notified under Food Safety and Standards Act, 2006; either singly or a combination of these, up to an extent of 15.0 per cent. It shall not contain added flavouring and colouring agents. The product shall be free from abnormal flavours, odours, living insects, visible mould, filth (impurities of animal origins, including dead insects).
2. It shall conform to the following standards, namely: -

S.No.	Parameter	Limit
1.	Moisture % by mass, Not more than	13.0
2.	Acid insoluble ash, % by mass (on dry basis), Not more than	0.1

3.	Total Protein (N x 6.25), % by mass (on dry basis), Not less than	15.0
4.	Total Dietary Fibre, % by mass (on dry basis), Not less than	7.0
5.	Alcoholic acidity, % Not more than	0.18
6.	Gluten, % by mass (on dry basis), Not less than	5.0
7.	* Urease activity(pH units rise), Not more than	0.02
8.	Uric Acid, mg/kg, Not more than	100

* Urease activity test shall be applicable if soy flour is used.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

2.4.2 MAIDA:

[73]**[1. Maida (Refined Wheat flour). -** (1) Maida (Refined wheat flour) means the product obtained from the clean grains of wheat by grinding or milling processes in which the bran and germ are essentially removed and the remainder is comminuted to a suitable degree of fineness. It shall be free from abnormal flavours, odours, living insects, filth (impurities of animal origin including dead insects).

(2) It shall conform to the following requirements, namely: -

TABLE

S. No.	Requirements	Limit
1.	Moisture, % by mass (not more than)	14.0
2.	Total ash, % on dry mass (not more than)	1.0
3.	Ash insoluble in dilute HCl, % on dry mass basis (not more than)	0.1
4.	Gluten, % on dry mass basis (not less than)	7.5
5.	Alcoholic acidity (with 90 percent alcohol) expressed as H_2SO_4, % on dry mass basis, not more than	0.12
6.	*Granularity % (not less than)	98 shall pass through 212 micron IS sieve (70 mesh)
7.	Uric acid (not more than), mg/kg	100

* The parameter 'Granularity will not be applicable for intermediate products which are not meant for direct consumption.]

2. [70][****]

3. **Protein rich (paushtik) maida** means the product obtained by mixing maida (wheat flour) with groundnut flour "or soya flour; or a combination of both" up to an extent of 10.0 per cent soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under regulation 2.4.13 (1). it shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavour and colouring agents or any other extraneous matter. It shall conform to the following standards:

It shall be free from Rodent hair and excreta

Moisture	Not more than 14.0 per cent
Total ash	Not more than 1.4 per cent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Total Protein (N x 6.25)	Not less than 12.5 percent on dry basis
Crude Fibre	Not more than 0.53 per cent on dry basis
Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4	Not more than 0.12 per cent
Gluten	Not more than 7.0 per cent on dry basis

Amendment for substitution of highlighted provision

[77]**[3. Protein rich refined wheat flour (Protein prachur maida)**

1. Protein rich refined wheat flour (protein prachur maida) means the product obtained by mixing maida (refined wheat flour) with solvent extracted groundnut flour, solvent extracted soya flour, Whey Protein flour; either singly or a combination up to an extent of 15.0 per cent. Soya flour individually shall not be more than 10.0 per cent and Whey Protein powder shall not be more than 5.0 per cent. It shall not contain added flavor and colouring agents. The product shall be free from abnormal flavours, odours, living insects, visible mould, filth (impurities of animal origins, including dead insects).

2. It shall conform to the following standards, namely: -

S. No.	Parameter	Limit
1.	Moisture % by mass, Not more than	12.0
2.	Acid insoluble ash, % by mass (on dry basis), Not more than	0.1
3.	Total Protein (N x 6.25), % by mass (on dry basis), Not less than	15.0
4.	Total Dietary Fibre, % by mass (on dry basis), Not less than	3.0
5.	Alcoholic acidity, % Not more than	0.12
6.	Gluten, % by mass (on dry basis), Not less than	6.0
7.	Urease activity (pH units rise), Not more than	0.02
8.	Uric Acid, mg/kg, Not more than	100]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

[37]**[4. "Durum wheat maida**" means the product prepared from grains of durum wheat (*Triticum durum* Desf.) by grinding or milling process in which the bran and germ are essentially removed and the remainder is comminuted to a suitable degree of fineness, which shall conform to the following standards, namely: -

Sl. No.	parameter	limit
(1)	Moisture (percent by mass), Max.	13.0
(2)	Total ash (on dry matter basis), Max %	1.75
(3)	Acid insoluble ash in dilute HCl (on dry matter basis), Max %	0.15
(4)	Protein (Nx6.25) (on dry matter basis), Min %	11.0

(5)	Alcoholic acidity (with 90 per cent. alcohol expressed as H_2SO_4), Max %	0.12
(6)	Particle size	Minimum 80 per cent. shall pass through a 315 micron silk gauze or man-made textile sieve]

[73]**[2.4.3 Semolina (Suji or Rawa). -(**1) Semolina (suji or rawa) means the product obtained from clean grains of wheat by grinding or milling processes in which the bran and germ are wholly/ partially removed and the remainder is comminuted to a suitable degree of fineness. It shall be free from abnormal flavours, odours, living insects, filth (impurities of animal origin including dead insects).

(2) It shall conform to the following requirements, namely: -

TABLE

S. No.	Requirements	Limit
1.	Moisture, % by mass (not more than)	14.5
2.	Total ash, % on dry mass (not more than)	1.0
3.	Ash insoluble in dilute HCl, % on dry mass basis (not more than)	0.1
4.	Gluten, % on dry mass basis (not less than)	6.0
5.	Alcoholic acidity (with 90 percent alcohol) expressed as H_2SO_4, % on dry mass basis, not more than	0.15
6.	Uric acid (not more than), mg/kg	100]

2.4.4 BESAN:

1. Besan means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter or any other foreign ingredient.

Besan shall conform to the following standards:—

Total ash	Not more than 5.0%.
Ash insoluble in dilute hydrochloric acid	Not more than 0.5%.

Amendment for substitution of highlighted provision

[75]**[2.4.4 BESAN. -** (1) Besan means the product obtained by grinding dehusked Bengal gram (*Cicerarietinum*). It shall not contain any added colouring matter. The product shall be free from abnormal flavours, odours, living insects, filth (impurities of animal origins, including dead insects).

(2) It shall conform to the following standards, namely: -

S. No.	Parameter	Limit

	(1)	Moisture % by mass (Not more than)	12.0
	(2)	Ash insoluble in dilute hydrochloric acid, % Not more than	0.3
	(3)	Alcoholic acidity (as H2SO4) with 90 percent alcohol by mass, not more than	0.18
	(4)	Protein (Nx6.25), % by mass (on dry basis), Not less than	20.0
	(5)	Uric Acid, mg/kg, Not more than	100]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

2.4.5 Pearl Barley (Jau)

1. Pearl Barley (Jau) shall be the product obtained from sound and clean barley (Horbeum vulgare or hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards namely:—

Total ash (on dry basis)	Not more than 1.0%
Ash insoluble in dilute hydrochloric acid (on dry basis)	Not more than 0.1%
Crude fibre (on dry basis)	Not more than 0.5%
Alcoholic acidity (as H2SO4) with 90 per cent alcohol)	Not more than 0.10 per cent

2. Wholemeal barley powder or barley flour or choker yukt jau ka churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta]. It shall conform to the following standards:—

Moisture	Not more than 14.0 per cent (when determined by heating at 130-133°C for 2 hours).
Total ash	Not more than 3.0 per cent (on dry weight basis).
Ash insoluble in dilute HCl	Not more than 0.5 percent (on dry weight basis).
Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.17 per cent

2.4.6 Food grains:

1. **Food grains** meant for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall conform, they shall be free from Argemone, Maxicana and Kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in regulation 2.3.1 of Food Safety and Standards (Contaminants, Toxins and Residues) Regulation, 2011 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in Regulation 2.3.1. of the said Table Food Safety and standards (Contaminants, Toxins and Residues) Regulation, 2011. The foodgrains meant for grinding/processing shall be clean, free from all impurities including foreign matter (extraneous matter).

2. Wheat

Description: Wheat shall be the dried mature grains of Triticum aestivum Linn. or Triticum vulgare vill, triticum drum Desf., triticum sphaerococcum perc., Triticum dicoccum schubl., Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards namely:—

(i)	Moisture—	Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130°C-133°C for two hours)
(ii)	Foreign matter — (Extraneous matter)	Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii)	Other edible grains	Not more than 6 per cent by weight.
(iv)	Damaged grainsù	Not more than 6.0 per cent by weight including kernel bunt afected grains and got affected grains. The limit of kernel bunt affected grains and ergot affected grains shall not exceed 3.0 per cent and 0.05 percent by weight, respectively.
(v)	Weevilled grains—	Not more than 10 per cent by count.
(vi)	Uric acid—	Not more than 100 mg. per kg.
[51][****]		
(viii)	Deoxynivalenol (DON)	Not more than 1000 micrograms per kilogram

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

3. **MAIZE:**

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome. It shall also conform to the following standards, namely:—

(i)	Moisture-	Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130oC-133oC for two hours).

(ii)	Foreign matter — (Extraneous matter)	Not more than 1 per cent. by weight of which not more than 0.25 per cent. by weight shall be mineral matter and not more than 0.10 per cent. by weight shall be impurities of animal origin.
(iii)	Other edible grains -	Not more than 3 per cent by weight.
(iv)	Damaged grains-	Not more than 5 per cent by weight.
(v)	Weevilled grains-	Not more than 10 per cent by count.
(vi)	Uric acid-	Not more than 100 mg. per kg.
(vii)	[51][****]	

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

[73][**4. JOWAR (Sorghum grains).-** (1) Sorghum grains are whole or decorticated grains obtained from species of *Sorghum Vulgare Pers.* These shall be sweet, hard, clean and wholesome.

(a) Whole sorghum grains.- These are sorghum grains obtained as such after a complete threshing without any further treatment.

(b) Decorticated (pearled) sorghum grains.- These are sorghum grains from which the external casings and whole or parts of the germ have been removed in an appropriate manner, using mechanical treatment.

(2) It shall conform to the following requirements, namely: -

TABLE

S.No.	Requirements	Limit
1.	Moisture % by mass (not more than)	14.5
2.	Extraneous Matter	Not more than 1.0 percent by mass of which not more than 0.25 percent by mass shall be mineral matter and not more than 0.10 percent by mass shall be impurities of animal origin.
3.	Other edible grains, % by mass, not more than	3.0
4.	Damaged grains, % by mass, not more than	6.0 percent by mass out of which ergot affected grains shall not exceed 0.05 percent by count.
5.	Weevilled grains, % by count, not more than	6.0
6.	Immature and Shrivelled grains, % by mass, not more than	8.0
7.	Uric acid (not more than) mg/kg	100]

[66][clause 5 omitted]

[51][Clause 6 to 14 omitted]

15. Any other foodgrains not specified above shall conform to the following standards, namely: —

(i)	Moisture-	Not more than 16 per cent by weight (obtained by heating the pulverized grains at 130°C-133°C for two hours).
(ii)	Foreign matter – (Extraneous matter)	Not more than 1 per cent. by weight of which not more than 0.25 per cent. by weight shall be mineral matter and not more than 0.10 per cent. by weight shall be impurities of animal origin.
(iii)	Other edible grains	Not more than 6 per cent by weight.
(iv)	Weevilled grains-	Not more than 10 per cent by count.
(v)	Damaged grains-	Not more than 5 per cent by weight.
(vi)	Uric acid-	Not more than 100 mg. per kg.
(vii)	[51][****]	

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 12.0 per cent by weight.

Explanation — For the purposes of items in regulation 2.4.6 (2-14): —

(a)"foreign matter" means any extraneous matter other than foodgrains comprising of-

(i) inorganic matter consisting or metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, straws, weed seeds and other inedible grains and also paddy in the case of rice;

(b) poisonous, toxic and/or harmful seeds - means any seeds which is present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D. fastur linn and D. stramonium linn), corn cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c)"Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or whether, viz., ergot affected grain and kernel bunt grains;

(d)"Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains;

(e)"Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

[19][16. **UNPROCESSED WHOLE RAW PULSES** (not for direct human consumption): The limits for foreign matter (extraneous matter) shall be maximum 3.0 per cent. by weight of which the maximum 0.5 per cent. by weight may be the inorganic matter and impurities of animal origin.

In addition, unprocessed whole raw pulse shall conform to the requirements of other standards referred to in this regulation. Pulses for direct human consumption shall conform to

the standards of the relevant pulse prescribed in the regulation 2.4.6.]

[26][17. OATS

(**1**) Oats shall be dried mature grains of *Avena sativa or Avena byzantina.* It shall be sound, clean, wholesome, and free from toxic seeds, live insects and visible mold. It shall also confirm to the following standards, namely: -

(i)	Moisture	Not more than 14.0 per cent. by weight
(ii)	Foreign matter (Extraneous matter)	Not more than 1 per cent. by weight of which not more than 0.25 per cent. by weight shall be mineral matter and not more than 0.10 per cent. by weight shall be impurities of animal origin.
(iii)	Other edible grains (grains other than oats)	Not more than 3 per cent. by weight.
(iv)	Damaged grains (including pieces of kernels that show visible deterioration due to moisture, weather, disease, insects, mould, heating, fermentation, sprouting or other causes)	Not more than 3 per cent. by weight.
(v)	Weevilled grains(weevilled grains include weevil infested grains and insect bored (which may be partially or wholly bored by insects)	Not more than 2 per cent. by count count out of which not more than 0.5 per cent. by count shall be insect bored.
(vi)	Minimum test weight (weight of hundred litre volume of oats expressed as kilograms per hectolitre (kg/hl).	Not less than 46 kg/hl
(vii)	Hull-less and broken kernels	Not more than 5 per cent. by weight.
(viii)	Uric acid	Not more than 100 mg per kg.
(ix)	Ergot	Sclerotium of the fungus *Claviceps purpurea* 0.05 per cent. m/m max

(2) Food Additives

The product shall contain food additives specified in Appendix A appended to these regulations.

(3) Contaminants, Toxins and Residues

The product contaminants, toxin and residues shall be in accordance with the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

(4) Food Hygiene

(a) The product shall be prepared and handled in accordance with the guidelines provided in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011.

(b) The product shall conform to the microbiological requirement specified in Appendix B to these regulations.

(5) Labelling

The product shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(6) Method of Sampling and Analysis

The method of sampling and analysis shall be in accordance with the FSSAI Manual of Method of Analysis of Food]

[37][**18**. **"Quinoa**" means the dried matured grain obtained from the plant of *Chenopodium quinoa from* which saponin has been removed by washing, scouring, dehulling or by any other suitable process, which shall conform to the following Standards, namely:-

Sl. No.	parameter	limit
(1)	Moisture (percent by mass), Max.	12.0
(2)	Extraneous matter	Not more than 1 per cent. by mass of which not (Extraneous matter) more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent. by mass shall be impurities of animal origin.
(3)	Other edible grains, Max %	0.5
(4)	Damaged grains, Max %	3.0
(5)	Uric acid (Not more than)	100 mg/kg
(6)	Saponin Content, Max. %	0.1]

[48][**19. Durum Wheat**

(1) Durum wheat shall be dried mature grains obtained from varieties of the species *Triticum durum Desf.*, which shall be free from abnormal flavours, odours, living insects and mites and shall conform to the following standards:

Parameters	Limits
Moisture (per cent. by mass), Maximum	13.0
Protein (per cent. on dry matter basis), Minimum	11.0
Beta Carotene (Yellow pigment), Minimum	5.0 ppm
Extraneous matter	Not more than 1 per cent. by mass out of which not more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent. by mass shall be impurities of animal origin
Other edible grains (per cent. by mass), Maximum	3.0
Damaged grains, (per cent. by mass), Maximum	4.0
Weevil Affected Grains (number of Grains per 100 g), Maximum	4
Minimum test weight (weight of 100 litre volume expressed in Kg)	70
Shrunken and broken kernels (per cent. by mass), Maximum	6.0
Ergot (per cent. by mass), Maximum	0.5
Uric acid (mg per kg), Maximum	100

(2) Food additives

The product may contain food additives permitted in Appendix A.

(3) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and residues) Regulations, 2011.

(4) Food hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(5) Packaging and labelling

The product covered by this Standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(6) Method of analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.

20. Finger Millet (Ragi)

(1) Ragi shall be the dried mature grains of *Eleusine coracana L. Gaertn,* which shall be free from added colouring matter, moulds, weevils, obnoxious substances, discolouration, poisonous seeds and all other impurities except to the extent indicated in the table in sub-clause (2) and shall also be free from rodent hair and excreta.

(2) The product shall conform to the following standards:

Parameters	Limits
Moisture (per cent. by mass), Maximum	12.0
Extraneous Matter	Not more than 1.0 per cent. by mass of which not (Extraneous matter) more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent. by mass shall be impurities of animal origin.
Other edible grains (per cent. by mass), Maximum	2.0

Damaged grains (per cent. by mass), Maximum	2.0
Immature and Shrivelled Grains (per cent. by mass), Maximum	3.0
Weevilled grains (per cent. by Count), Maximum	2
Uric acid (mg per kg), Maximum	100

(3) Food additives

The product may contain food additives permitted in Appendix A.

(4) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and residues) Regulations, 2011.

(5) Food hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(6) Packaging and labelling

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(7) Method of analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.

21. Amaranth

(1) Amaranth shall be the dried mature grains of Amaranthus caudatus, Amaranthus cruentus and Amaranthus hypochondriacus, which shall be free from added colouring matter, moulds, weevils, obnoxious substances, discolouration, poisonous seeds and all other impurities except to the extent indicated in the table in sub-clause (2) and shall also be free from rodent hair and excreta.

(2) The product shall conform to the following standards, namely:-

Parameters	Limits
Moisture (per cent. by mass), Maximum	12.0
Other edible grains (per cent. by mass),Maximum	1.0
Damaged grains (per cent. by mass), Maximum	2.0
Extraneous matter	Not more than 1.0 per cent. by mass of which not (Extraneous matter) more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent by mass shall be impurities of animal origin.
Immature and Shrivelled Grains (per cent. by mass), Maximum	3.0
Weevilled grains (per cent. by Count), Maximum	2
Uric acid (mg per kg), Maximum	100

(3) Food additives

The product may contain food additives permitted in Appendix A.

(4) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

(5) Food Hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(6) Packaging and labelling

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(7) Method of analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.**]**

[51][**22. Pulses:** (1) This standard applies to the whole or shelled (de-husked) or split pulses and they shall be free from toxic or noxious seeds and added coloring matter and also applies to mix of various pulses covered in this standard.

(2) The following pulses shall be covered under his standards, namely:-

(I) Lentil (Masur) - *Lenil esculenta* Moench *or Lens culinaris* Medik *or Ervem lens* Linn*;*

(II) Black gram (Urd) – Phaseolus mungoLinn;

(III) Green gram (Moong) - Phaseolus aureus Roxb., Phaseolus radiatus Roxb;

(IV) Bengal gram (Chana or Chick pea) or Kabuli chana or Chhole or(green chick pea) hara chana - Cicer arietinum Linn;

(V) Red gram (Arhar) – Cajanus cajan (L) Millsp;

(VI) Horse gram (Kulthi) –Dolichosbiflorus;

(VII) Field bean (Black, Brown, White), Sem - Phaseolus vulgaris ;

(VIII) Peas dry (Matra) –Pisumsativum;

(IX) Soybean – Glycine max Merr.);

(X) Rajmah or Double beans or Broad beans or Black beans – (Phaseolus vulgaris);

Phaseolus vulgaris)

(XI) Lobia or black eyed beans or black eyed white lobia – (Vignacatjang);

(XII) Moth bean (matki) – (Phaseolusaconitifolius Jacq.).

(3) The pulses shall conform to the following standards, namely:-

Sl.No.	Parameter	Limit

(I)	Moisture Content (per cent. by mass), Max.	14	Pulses without seed coat - 12
(II)	Extraneous Matter	Not more than 1 per cent. by mass of which not more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent. by mass shall be impurities of animal origin.	
(III)	Defects (I) Seeds with serious defects. (Seeds in which the cotyledons have been affected or attacked by pests; seeds with very slight traces of mould or decay; or slight cotyledon staining.)	Not more than 1 per cent.	
	(II) Seeds with slight defects. (Seeds which have not reached normal development; seeds with extensive seedcoat staining, without the cotyledon being affected; seeds in which the seedcoat is wrinkled, with pronounced folding or broken pulses *)	Not more than 7 per cent. of which broken pulses must not exceed 3 per cent.	
(IV)	Other edible pulses/ grains ,by mass	Not more than 2 per cent.	
(V)	Discoloured seeds by mass	Not more than 3 per cent.	
(VI)	Uric acid (not more than)	100 mg per kg.	

Note- * Broken in whole pulse in which the cotyledon is separated or one cotyledon is broken and broken in split pulses are pulses in which the cotyledon is broken.

23. Whole and decorticated pearl millet grains (Bajra): (1)Pearl millet grains (whole or decorticated grains) shall be the dried mature grains of *Pennisetum typhoideum* Rich or *Pennisetum americanum* L.

(2) Whole grains.- The whole grains of pearl millet obtained as such after proper threshing with no mechanical treatment.

(3) Decorticated grains.- The decorticated grains of pearl millet from which outer parts, amounting to 20–22per cent. of the weight of the whole grains is removed in an appropriate manner using mechanical treatment including simple abrasion.

(4) The grain shall be free from abnormal flavours, odours and living insects and they shall also be free from added coloring matter, moulds, weevils, obnoxious substances, discoloration, poisonous seeds, etc.

(5) The grain shall conform to the following standards for Whole millet grains, namely.-

Sl.No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	13
(II)	1 Litre mass (in gms)	750-820
(III)	Extraneous matter	Not more than 1 per cent. By mass of which not more than 0.25 per cent. By mass shall be mineral matter and not more than 0.10 per cent. By mass shall be impurities of animal origin.
(IV)	Damaged grains per cent. by mass (Not more than)	6 out of which ergot affected grains shall not exceed 0.05 per cent. by mass
(V)	Weevilled grains(Not more than)	6 per cent. by count
(VI)	Other edible grains per cent. by mass (Not more than)	2
(VII)	Uric acid (Not more than)	100 mg per kg

(6) The grain shall conform to the following standards for decorticated millet grains, namely:-

Sl.No.	Parameter	Limit

(I)	Moisture (per cent. by mass), Max.	13
(II)	Appearance: Brown, white or green	Hard, uniform in shape and size.
(III)	1000 kernel weight Decorticated millet grains (in gms)	4.0-8.0
(IV)	1 Litre mass (in gms)	750-820
(V)	Extraneous matter	Not more than 1 per cent. By mass of which not more than 0.25 per cent. By mass shall be mineral matter and not more than 0.10 per cent. By mass shall be impurities of animal origin.
(VI)	Damaged grains (per cent. by mass), Not more than	6 out of which ergot affected grains shall not exceed 0.05 per cent. by mass
(VII)	Weevilled grains per cent. (Not more than)	6 per cent. by count
(VIII)	Immature & Shrivelled grain per cent. by mass (Not more than)	8
(IX)	Other edible grains (per cent. by mass), Not more than	2
(X)	Ash (per cent. on dry matter basis)	0.8 to 1
(XI)	PROTEIN (per cent. by mass on a dry basis), Not less than	8
(XII)	Decortication per cent.	20 -22
(XIII)	crude fibre per cent. by mass (on a dry basis)	2
(XIV)	fat per cent. by mass on a dry basis	2 to 4
(XV)	Uric acid (Not more than)	100 mg per kg.]

[66][**24. Rice.-** (1) Rice shall be whole and broken kernels obtained from the species *Oryza sativa L* and shall be of the following types, namely:-

1. Brown Rice (De- Husked) is obtained from paddy by removing husk and the process of de - husking and handling may result in some loss of bran;

2. Milled Rice is obtained by milling or polishing of dehusked rice of paddy and also removal of all or part of the bran and germ by polishing;

3. Parboiled brown (De- Husked) rice (Brown rice of parboiled paddy) is obtained by removing husk of parboiled paddy;

4. Milled Parboiled rice is obtained from de- husked parboiled paddy and removal of all or part of the bran and germ by polishing.

(2) They shall conform to the following standards for rice, namely:-

S.No.	Requirements	Limits			
		Brown Rice (De-Husked)	Milled Rice	Parboiled brown (De- Husked) Rice(Brown rice of parboiled paddy)	Milled Parboiled Rice
(i)	Moisture per cent by mass, (Not more than)	15.5	15.5	15.5	15.5
(ii)	(a) organic extraneous matter (per cent by mass)	1.5	0.8	1.5	0.8
	(b)Inorganic extraneous matter[out of this impurities of animal origin(including dead insects)shall not be more than 0.1 per cent] (per cent by mass)	0.2	0.2	0.2	0.2
(iii)	Weevilled kernels(per cent by count), not more than	5	5	5	5
Defective Kernels					
(iv)	Heat – Damaged Kernels (per cent m/m) , not more than	6	5	10	8

(v)	(a)Damaged Kernels (per cent m/m) , not more than				
	(b)Kernels with Pin point (per cent m/m) , not more than	-	4.0	-	4.0
(vi)	Immature Kernels(per cent m/m) , not more than	12.0	0.5	12.0	0.5
(vii)	Chalky Kernels(per cent m/m) , not more than	11.0	5.0	Nil	0.1
(viii)	Uric acid (mg per kg), maximum	100	100	100	100

Explanation. - For the purposes of this clause,-

(a) "Heat-Damaged" means kernels, whole or broken, that have changed their normal colour as a result of heating;
(b) "Damaged Kernels" means kernels, whole or broken, showing obvious deterioration due to moisture, pests, diseases, or other causes, but excluding heat-damaged kernels;
(c) "Immature Kernels" are unripe or undeveloped whole or broken kernels;
(d) "Chalky Kernels" means whole or broken kernels except for glutinous rice, of which at least three quarters of the surface has an opaque and floury appearance;
(e) "Kernels with Pinpoint" are kernels or pieces of kernels having minute black spot of pin point size.

25. **Chia Seeds**-(1) Chia seeds (*Salvia hispanica L*) are obtained from the plant of mint family (*Labiatae*).

(2) It shall conform to the following standards, namely:-

S.No.	Requirements	Limits
(i)	Moisture(per cent m/m), not more than	11.5
(ii)	Extraneous matters	Not more than 1 per cent. by mass of which not (Extraneous matter) more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent. by mass shall be impurities of animal origin

(iii)	Other edible grains per cent by mass(Not more than)	0.5
(iv)	Damaged grains per cent by mass (Not more than)	3.0
(v)	1000 grain mass (gm), Range	1.2 -1.6
(vi)	Acidity of extracted fat (mg KOH/gm), not more than	2.0
(vii)	Uric acid (mg per kg), maximum	100 .]

2.4.7 CORNFLOUR (Maize starch):

1. **CORNFLOUR (Maize starch)** means the starch obtained from maize (zea mays L.). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter. It shall conform to the following standards:—

Moisture	Not more than 12.5%
Total ash	Not more than 0.5 per cent (on dry weight basis).
Ash insoluble in dilute HCl	Not more than 0.1 percent (on dry weight basis).
Alcoholic acidity (with 90 per cent alcohol)	Shall be equivalent to not more than 2.0 ml. N. NaOH per 100 g. of dried substance

Amendment for substitution of highlighted provision

[75]**[2.4.7 MAIZE STARCH.-** (1) Maize starch (or Corn starch) means the starch obtained from maize (*Zea mays L.).* It shall be odourless and white color free flowing powder. It shall contain no added colour, flavours or other chemicals. It shall also be free from dirt, insects, larvae and impurities or other extraneous matter. It shall conform to the following standards, namely: —

S. No.	Parameter	Limit
(1)	Moisture (% by mass), Not more than	12.0
(2)	Total ash (% on dry basis), Not more than	0.50
(3)	Acid Insoluble ash (% on dry basis), Not more than	0.10
(4)	Alcoholic acidity (expressed as H2SO4)	0.10

	with 90 percent alcohol, percent by mass, Not more than	
(5)	Starch content (% on dry basis), Not less than	98.0
(6)	pH	4.5-7.0
(7)	Sulphur Dioxide (ppm), Not more than	70.0
(8)	Uric Acid, mg/kg, Not more than	100]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

2.4.8. CORN FLAKES:

[51][1. Corn flakes means the product obtained from dehulled, degermed and cook corn (*Zea mays* L.) by flaking, partially drying and toasting. It may contain any other permitted ingredients appropriate to the product whose standards are prescribed in these regulations. It shall be in the form of crisp flakes of reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

The Corn flakes shall conform to the following standards, namely.-

Sl. No.	Parameter	Limit
(I)	Moisture (per cent. By mass), Max.	7.5
(II)	Total ash excluding salt (per cent. on dry mass basis), Max	1
(III)	Ash insoluble in dilute HCl (per cent. on dry mass basis), Max	0.1
(IV)	Alcoholic acidity (with 90 per cent. alcohol)	Shall be equivalent to not more than 2.0 ml. N. NaOH per 100 g. of dried substance.]

2.4.9 CUSTARD POWDER:

1. CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/topioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be the form of fine powder, free from rancidity, fermented and musty odour. It shall conform to the following standards namely:—

Moisture	Not more than 12.5%
Total ash excluding added common salt (on dry basis)	Not more than 0.5 per cent
Ash insoluble in dilute HCl (on dry basis)	Not more than 0.1 percent

2.4.10 MACARONI PRODUCTS:

1. [26]**[PASTA PRODUCTS**: means the product obtained from one or a combination of ingredients including suji , maida , rice flour, groundnut flour, tapioca flour, edible soy flour or flour of any other cereal referred to in sub-regulation 2.4 by kneading the dough and extending it or by any other process. It may contain one or more of the following ingredients either singly or in combination:

milk powder, fruit and vegetables and products thereof or their extracts; edible common salt, nutritive sweeteners, meat and products thereof; fish and products thereof; eggs and products thereof; spices, condiments and herbs including their extracts; vitamins and minerals; edible fats and oils; yeast extract, yeast and product thereof; hydrolysed plant protein and soy sauce powder.

It may contain food additives specified in Appendix A appended to these regulations. It shall be free from dirt, insect's larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 per cent.
Ash insoluble in dilute HCl (On dry basis)	Not more than 0.1 per cent.]

[37]**[**2. (1)The **"**Instant noodle (not applied to noodle seasoning)" means the product prepared from wheat flour or rice flour or flour of any other cereals, millets and legumes covered in sub-regulation 2.4 of these regulations or combination thereof or flour from tubers and water as the main ingredient, with or without the addition of herbs, condiments and seasoning, spices, iodised salt, sugar, wheat gluten by kneading the dough and extending it, and starches, *dried fruits and vegetables, or their products or extracts, nuts, edible protein and egg powder*, *meat, poultry, marine or their products* [whose standards are prescribed in these regulations] *may be added, if required*.

(2) Instant noodle is characterised by the use of pregelatinization process and dehydration either by frying in any oil or fat covered under sub-regulation 2.2 or by other methods, and the product shall be presented as Fried noodles or Non-fried noodles.

(3) The product shall be of good characteristic colour, appearance, texture, aroma and taste and shall be free from undesirable taste, dirt, insect's larvae and impurities or any other extraneous matter, which shall conform to the following standards, namely:-

S.No.	Parameter	Fried noodles	Non- fried noodles

(a)	Moisture (percent by mass), Max.	10.0	13.0
(b)	Acid insoluble ash (on dry matter basis), Max %	0.3	0.3
(c)	Acid Value, Max.	2.0	---

(4) the manufacturer shall label seasoning, if any, accompanying the instant noodles distinctly on the package]

2.4.11 MALTED AND MALT BASED FOODS

1. MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agents, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vacuum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. It shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain added sugar. Malted milk food shall also conform to the following standards, namely:—

		Malted milkfood without Cocoa powder	*Malted milkfood with cocoa powder*
(a)	Moisture	Not more than 5 per cent by weight.	Not more than 5 per cent by weight
(b)	Total protein (N x 6.25) (on dry basis)	Not less than 12.5 per cent by weight.	Not less than 11.25 per cent by weight.
(c)	Total fat (on Dry basis)	Not less than 7.5% by weight	Not less than 6% by weight.
(d)	Total ash (on dry basis)	Not more than 5% by weight	Not more than 5% by weight.
(e)	Acid insoluble ash (on dry basis) (in dilute HCl)	Not more than 0.1 per cent by weight	Not more than 0.1 per cent by weight
(f)	Solubility	Not less than 85% by weight.	Not less than 80% by weight.
(g)	Cocoa powder (on dry basis)	--	Not less than 5.0% by weight.
(h)	Test for starch	Negative	—
(i)	Bacterial count	Not more than 50,000 per gram.	Not more than 50,000 per gram.
(j)	Coliform count	Not more than 10 per gram.	Not more than 10 per gram.
(k)	Yeast and mould count		absent in 0.1 gm
(l)	Salmonella and Shigella		absent in 0.1 gm
(m)	E.Coli		absent in 0.1 gm
(n)	Vibrio cholera and V.Paraheamolyticus		absent in 0.1 gm
(o)	Faecal streptococci and Staphylococcus aureas		absent in 0.1 gm

2. **MALT BASED FOODS (MALT FOOD**) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices, emulsifying agents, eggs, egg powder, protein isolates, protein hydrolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and/or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound, uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:—

(a)	Moisture	- Not more than 5 per cent, by weight
(b)	Total Protein (N x 6.25) (on dry basis)	- Not less than 7.0 per cent, by weight
(c)	Total ash (on dry basis)	- Not more than 5 per cent, by weight
(d)	Acid insoluble ash (in dilute HCl)	- Not more than 0.1 per cent, by weight
(e)	Total plate count	- Not more than 50,000 per gram.
(f)	Coliform count	- Not more than 10 per gram.
(g)	Yeast and Mould Count	- Not more than 100 per gram.
(h)	E Coli	- Absent in 10 gram.
(i)	Salmonella and Shigella	- Absent in 25 gram
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 per cent alcohol (on dry weight basis)	- Not more than 0.30 per cent.
(k)	Vibrio cholera and V.Paraheamolyticus	absent in 0.1 gm
(l)	Faecal streptococci and Staphylococcus aureas	absent in 0.1 gm

[27][**3. MALT EXTRACT** means the product prepared by digesting with water, sound malted grains, of cereals (such as barley, wheat and millets) at a suitable temperature with or without adding enzymes. The water extract is then strained and evaporated into a viscous product. Malt or malt extract shall not be prepared from wheat gluten, corn grits, edible starches (such as potato or tapioca), unmalted whole grains and legume flours. It shall be a viscous liquid, amber or yellowish brown in colour and shall possess a characteristic odour and sweet taste. The material shall be free from any adulterants, off-odour, foreign flavour and impurities. It may contain wheat gluten, soya protein or any other external protein sources intended for use in the manufacture of malted milk food, malt based foods etc.

Malt Extract shall be of the following types:-

(i) Diastatic Malt Extract;
(ii) Non Diastatic Malt Extract; and
(iii) Brewery Grade Malt Extract.

It shall also conform to the following standards, namely:-

Characteristic	*Requirement*		
	Type 1	Type 2	Type 3
Density at 20^0 C Min	1.39	1.39	1.39
Refractive Index at 20^0 C, Min	1.489	1.489	1.489
Total solids (as is basis), % by weight, Min	77	77	55
Reducing sugar, on dry basis, (calculated as anhydrous maltose), % by weight,	55-65	55-65	55-65
Crude protein (on dry basis), % by weight, Min	3.5	3.5	2.5
Test for starch	Negative	Negative	Negative

2. Food Additives

Only those food additives permitted under the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 shall be used.

3. Hygiene

The product shall be prepared and handled in accordance with the guidelines provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidance as provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

4. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

The products covered in this standard shall conform to the Microbiological Requirements given in Appendix B of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

5. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011]

[53]**[4. Formulated supplements for children**

(1) Scope: This standard specifies requirements of formulated supplements for children of age above 24 months till 36 months.

(2)Description: Formulated supplements for children shall be of appropriate nutritional quality to provide additional energy and nutrients to complement the family foods derived from the local

produce by providing those nutrients that are either lacking or are present in insufficient quantities. These foods may be presented in any other age suitable food format.

(3) Suitable raw materials and ingredients:

(i) Basic raw materials and ingredients permitted to be used include:

(a) Cereals: All milled cereals suitable for human consumption processed in such a way as to reduce the fibre content, when necessary. Such cereals processed in a way to decrease, and, if possible to eliminate the anti-nutrients such as phytates, tannins and other phenolic materials, lectins, trypsins and chymo-trypsin inhibitors which can lower the protein quality and digestibility, amino acid bioavailability and mineral absorption shall be permitted. Appropriate enzymes for decreasing the fibre content and anti-nutrients may be used during such processing. Cereals as a source should mainly contain carbohydrates and significant quantity (8-12%) of protein.

(b) Legumes and pulses: Legumes and pulses such as chick peas, cow peas, lentils, peas, green gram, kidney beans, soya beans containing at least 20% protein on dry basis. Legumes and pulses provide lysine that is deficient in cereals but deficient in L-methionine which may be added.

Legumes and pulses must be appropriately processed to reduce, as much as possible, the anti-nutritional factors normally present such as phytates, lectins (haemagglutenins), trypsin and chemo-trypsin inhibitors. Soya when used must be ensured that it contains low levels of phytoerstrogens. [lectins may be reduced by moist heat treatment; trypsin inhibitor activity by heating to high temperature or prolonged boiling; phytates may be reduced enzymatically or by soaking; phytoestrogens by fermentation]. Field beans and faba beans shall not be used due to favism.

(c) Oil seed flours and oil seed protein products: Flours, protein concentrates and protein isolates of oil seeds with reduced anti-nutritional factors and undesirable toxic substances such as trypsins and chymotrypsin inhibitors, gossypol and urease activity. The following oil seeds depending on local conditions and requirements may be used;

I. Soyabeans: dehulled flour, (full fat and defatted) protein concentrate, protein isolate
II. Ground nut: paste, protein isolate
III. Sesame seeds: whole ground and defatted flour
IV. Sunflower seed: defatted flour
V. Low erucic acid rape seed: full fat flour

Defatted oil seed flours and protein isolates, if produced and appropriately processed for human Consumption, can be used as a good source of protein (47-95%).

(d) Animal source foods: Animal source foods such as meat, fish, poultry and eggs and their primary processed products are nutrient dense and source of high quality protein and micronutrients. It may also contain protein concentrates derived from these sources.

(e) Fats and oils: Fats and oils may be added in adequate quantities for the purpose of increasing the energy density of the product. It shall not contain partially hydrogenated fats.

(f) Fruits and vegetables: Fruits and vegetables and their primary processed products as a good source of micronutrients, when technologically feasible.

(g) Milk and milk products: Foods such as milk and milk products are nutrient dense and source of high quality protein and micronutrients. It may also contain protein concentrates derived from these sources.

(ii) Other ingredients: Other ingredients including those listed below may be used to improve the nutritional quality,-

(a) Digestible carbohydrates to increase energy density of foods;

(b) Protein isolates, concentrates and hydrolysates;

(c) Probiotic ingredient(s) and prebiotc ingredient(s) as provided under schedule VII and schedule VIII, respectively, of the Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, Functional Food and Novel Food) Regulations, 2016 along with other requirements laid down under the said regulations;

(d) Algal and fungal oil as sources of Docosahexaenoic Acid (DHA) and Arachidonic Acid (ARA) from *Crypthecodinium cohnii, Morterella alpine, Schizochytrium sp.,* and *Ulkenia sp.* at the level of maximum 0.5 per cent Docosahexaenoic acid (DHA) of total fatty acids and ratio of arachidonic acid (ARA): docosahexaenoic acid (DHA) as 1:1 minimum.

Provided that docosahexaenoic acid (DHA) content shall not be less than 0.2 per cent of total fatty acids, if a claim related to the addition of docosahexaenoic acid (DHA) is made.

(e) Carbohydrates such as sucrose, dextrose and dextrins or maltodextrin, maltose and lactose.

Provided that the energy from added sugar per 100 g of the product shall not exceed 10 per cent of energy of the product.

(f) Vitamins, minerals and other nutrients: Following vitamins, minerals and other nutrients may be added to improve the micronutrient level of the product at the level as shown in the table:-

1.	Vitamin A (as retinol), µg per 100 g	Not less than 120.0

		Not more than 400.0
2.	Vitamin D (expressed as cholecalciferol or ergocalciferol), µg per 100 g	Not less than 3.0 Not more than 10.0
3.	Vitamin C, mg per 100 g	Not less than 12.0 Not more than 40.0
4.	Thiamine, µg per 100 g	Not less than 150.0 Not more than 500.0
5.	Riboflavin, µg per 100 g	Not less than 180.0 Not more than 600.0
6.	Niacin, mg per 100 g	Not less than 2.50 Not more than 8.0
7.	Pyridoxine, µg per 100 g	Not less than 270.0 Not more than 900.0
8.	Folic Acid, µg per 100 g[1]	Not less than 14.50 Not more than 48.0
9.	Pantothenic acid, mg per 100 g	Not less than 0.60 Not more than 2.0
10.	Vitamin B_{12}, µg per 100 g	Not less than 0.15 Not more than 0.50
11.	Choline, mg per 100 g	Not less than 32.0
12.	Vitamin K, µg per 100 g	Not less than 4.50 Not more than 15.0
13.	Biotin, µg per 100 g	Not less than 2.50 Not more than 8.0
14.	Vitamin E (as L- tocopherols), mg per 100 g	Not less than 1.50 Not more than 5.0
15.	Sodium, mg per 100 g	Not less than 90.0 Not more than 300
16.	Potassium, mg per 100 g	Not less than 270.0 Not more than 900.0
17.	Chloride, mg per 100 g	Not less than 240.0 Not more than 800.0
18.	Calcium, mg per 100 g	Not less than 180.0

		Not more than 600.0
19.	Phosphorus, mg per 100 g	Not less than 135.0 Not more than 450.0
20.	Magnesium, mg per 100 g	Not less than 15.0 Not more than 50.0
21.	Iron, mg per 100 g	Not less than 2.50 Not more than 9.0
22.	Iodine, µg per 100 g	Not less than 27.0 Not more than 90.0
23.	Copper, µg per 100 g	Not less than 102.0 Not more than 340.0
24.	Zinc, mg per 100 g	Not less than 1.50 Not more than 5.0
25.	Manganese, mg per 100 g	Not less than 0.30 Not more than 1.20
26.	Selenium, µg per 100 g	Not less than 5.0 Not more than 17.0
27.	Inositol, g per litre*	Not more than 0.40
28.	Taurine, mg per 100 g	Not more than 60.0
29.	Essential amino acids, mg per litre*	Not less than 9.0

(* When prepared in accordance with instructions for use; [1]1 microgram DFE = 0.6 microgram folic acid.)

(g) Formulated supplements for children shall use the source compounds for vitamins, minerals and other nutrients from sub-regulation 2.1.19 related to 'Foods for Infant Nutrition' provided under these regulations.

(4) Essential requirements:-

(i) Energy density shall be at least 4 kilo calories per gram on dry basis;

(ii) Protein digestibility corrected amino acid score (PDCAAS) shall not be less than 70% of the WHO amino acid pattern for the children from 2 to 5 years. Protein shall be min 15% with Protein Efficiency Ratio (PER) of 2.0 or minimum 20% with PER of 1.75.

(iii) Moisture (per cent by weight) : Max 8.0;

(iv) Fat (per cent by weight): Min 7.50;

(v) Total ash (per cent by weight): Max 7.50;

(vi) The product shall conform to the microbiological requirements of 'Follow up formula' given in Appendix B of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

(5) Food additives: (i) The following food additives may be used in the preparation of formulated supplements for children in 100 g of the product ready for consumption prepared following Manufacturer's instruction, unless otherwise indicated.

(ii) Carry-over of food Additives into foods shall be in accordance with clause 3.1.1.(10) of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

INS No.	Additive	Maximum level
Emulsifiers		
322	Lecithins	1500 mg
471	Mono- and diglycerides	500 mg Singly or in combination
472a	Acetic and fatty acid esters of glycerol	
472b	Lactic and fatty acid esters of glycerol	
472c	Citric and fatty acid esters of glycerol	
Acidity Regulators		
500 ii	Sodium hydrogen carbonate	
501 ii	Potassium hydrogen carbonate	
170 i	Calcium carbonate	
270	L(+) Lactic acid	
330	Citric acid	
260	Acetic acid	

261	Potassium acetates	GMP
262 i	Sodium acetate	
263	Calcium acetate	
296	Malic acid (DL) – L(+)-form only	
325	Sodium lactate (solution) – L(+)-form only	
326	Potassium lactate (solution) – L(+)-form only	
327	Calcium lactate – L(+)-form only	
331i	Monosodium citrate	
331ii	Trisodium citrate	
332i	Monopotassium citrate	
332ii	Tripotassium citrate	
333	Calcium citrate	
507	Hydrochloric acid	
524	Sodium hydroxide	
525	Potassium hydroxide	
526	Calcium hydroxide	
575	Glucono delta-lactone	
334	L(+)-Tartaric acid – L(+)form only	500 mg Singly or in combination Tartrates as residue in biscuits and rusks
335 i	Monosodium tartrate	
335 ii	Disodium tartrate	
336 i	Monopotassium tartrate –L(+)form only	
336 ii	Dipotassium tartrate – L(+)form only	

337	Potassium sodium L(+)tartrate L(+)form only	
338	Orthophosphoric acid	Only for pH adjustment 440 mg Singly or in combination as phosphorous
339 i	Monosodium orthophosphate	
339 ii	Disodium orthophosphate	
339 iii	Trisodium orthophosphate	
340 i	Monopotassium orthophosphate	
340 ii	Dipotassium orthophosphate	
340 iii	Tripotassium orthophosphate	
341 i	Monocalcium orthophosphate	
341 ii	Dicalcium orthophosphate	
341 iii	Tricalcium orthophosphate	
Antioxidants		
306	Mixed tocopherols concentrate	300 mg/kg fat or oil basis, Singly or in combination
307	Alpha-tocopherol	
304	L-Ascorbyl palmitate	200 mg/kg fat
300	L-Ascorbic acid	50 mg, expressed as ascorbic acid
301	Sodium ascorbate	
303	Potassium ascorbate	
302	Calcium ascorbate	20 mg, expressed as ascorbic acid
Raising Agents		
503 i	Ammonium carbonate	Limited by GMP

503 ii	Ammonium hydrogen carbonate	
500 i	Sodium carbonate	
500 ii	Sodium hydrogen carbonate	
Thickeners		
410	Carob bean gum	1000 mg singly or in combination 2000 mg in gluten-free cereal-based foods
412	Guar gum	
414	Gum arabic	
415	Xanthan gum	
440	Pectins (Amidated and Non- Amidated)	
1404	Oxidized starch	5000 mg Singly or in combination
1410	Monostarch phosphate	
1412	Distarch phosphate	
1413	Phosphateddistarch phosphate	
1414	Acetylated distarch phosphate	
1422	Acetylated distarchadipate	
1420	Starch acetate esterified with acetic anhydride	
1450	Starch sodium octenyl succinate	
1451	Acetylated oxidized starch	
Anticaking Agents		
551	Silicon dioxide (amorphous)	200 mg for dry cereals only
Packaging Gases		
290	Carbon dioxide	GMP

941	Nitrogen	GMP
Flavours		
	Natural fruit extracts	GMP
	Vanilla extract	GMP
	Ethyl vanillin	7 mg
	Vanillin	7mg

(6) The product and its components shall not have been treated by ionizing radiation.

(7) Contaminants, Toxins and Residues: (i) The product shall conform to the limits of contaminants as Specified in Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

(ii) The products shall be prepared with special care under good manufacturing practices, so that residues of those pesticides which may be required in the production, storage or processing of the raw materials or the finished food ingredients do not remain, or, if technically unavoidable, are reduced to the maximum extent possible.

(iii) The product shall be free from residues of hormones, antibiotics as determined by means of agreed methods of analysis and practically free from other contaminants, especially pharmacologically active substances.

(8) Food Hygiene: The product shall be prepared and handled in accordance with Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011.

(9) Packaging and Labelling:

(i) The food shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from paper, polymer and/ or metallic film as per the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 so as to protect the contents from deterioration. It shall be packed under inert atmosphere.

(ii) The product shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 and the specific labelling requirements provided in these regulations.

(iii) The name of the food to be declared on the label shall indicate that the food is a formulated supplement for children.

Provided that these products shall not be presented as 'Energy food' or 'Health food'.

(iv) Label of this food shall not refer to malnourished children.

(v) The label should clearly indicate the major sources of protein and product is recommended for children age above 24 months till 36 months.

(vi) The label shall also declare information relating to allergen.

(vii) Instructions for use:

(a) Directions as to the preparation and use of the food shall be given; preferably accompanied by graphical presentations.

(b) In the case that addition of water is needed, the directions for the preparation shall include a precise statement that:

(i) where the food contains non-heat-processed basic ingredients, the food must be adequately boiled in a prescribed amount of water;

(ii) where the food contains heat-processed basic ingredients:

(a) the food requires boiling, or
(b) can be mixed with boiled water that has been cooled.

(iii) Formulated supplements for Children foods to which fats, sugars or other digestible carbohydrates shall be added during preparation, the instructions for use shall identify appropriate sources and indicate the amounts of the ingredients to be added. In such situations, fats and oils with an appropriate essential fatty acid ratio shall be recommended.

(iv) Directions for use shall include a statement that only an amount of food sufficient for one feeding occasion shall be prepared at one time. Foods not consumed during the feeding occasion shall be discarded, unless consumed within a period as recommended by the manufacturer under the instructions for use.

(v) The label shall also include a statement that 'formulated supplements for children are to be consumed to complement family foods and breast milk or breast milk substitutes'.

(10) Method of sampling and analysis: (i) Method of sampling and analysis shall be as per the Food Safety and Standards (Laboratory and Sample Analysis) Regulations, 2011 and manuals published by the Food Authority.

(ii) The tolerance limit for variation in case of formulated supplements for children during analysis of samples of finished products shall not be more than ±10.0 per cent. from the declared value of the nutrients or nutritional ingredients on the label.]

Amendment for substitution of highlighted provision

[76][A variation of minus 10.0 per cent from the declared value of the nutrients or nutritional ingredients on the label shall be allowed and the nutrient levels shall not exceed maximum limits as specified in the composition tables.]

[Amendment in force from 3rd November, 2021; FBOs to comply with the provisions by 1st June, 2022]

2.4.12 ROLLED OATS:

1. **ROLLED OATS** (quick cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and flavouring agents. It shall be in the form of flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments. It shall conform to the following standards:—

Moisture	Not more than 10.0 %
Total ash	Not more than 2.0 per cent on dry basis
Ash insoluble in dilute HCl (on dry basis).	Not more than 0.1 percent
Nitrogen	Not less than 1.8 per cent on dry basis
Crude Fibre	Not more than 2.0 percent on dry basis
Alcohol acidity (with 90 per cent alcohol)	Shall be equivalent to not more than 8.0 ml. N.NaOH per 100 gm. of dried substance.

Amendment for substitution of highlighted provision

[76][2.4.12 OAT PRODUCTS. -

1. (A) Rolled Oats.- Rolled/Flaked Oats (Quick Cooking Oats) means the product made from sound hulled oats(*AvenaSativa*).It shall be free from added colours, rancidity and flavoring agents. It shall be in form of flakes of uniform size having a light cream colour.

1. (B) Products containing oats. – (i) Means the product containing oats as the major ingredient including oat bran, oat flour, oat meal, oat-trim, kilned dehulled oats, Steel cut Oats, Oat flakes

(various thickness, which may make them instant, quick cooking or whole oats) etc. These may be made by using various process such as kilning, drying, rolling, slitting, cutting, steel cutting, gritting, de-hulling, flaking, grinding etc.

(ii) It may contains edible common salt or salt substitutes, Dairy products and Analogues, natural and non-nutritive sweeteners, sugar and sugar products, honey, invert sugar, jaggery, dextrose, edible molasses, liquid glucose, fruits and vegetables and their products (including dried fruits and vegetables), cocoa and its products, Coconut and its products, egg and its products, gluten, nut and nut products, cereal, legumes, malt and malt extract, edible starches and edible flours, spices, condiments, herbs and their extracts, seasonings, vinegar, edible seeds, protein concentrates or isolates, enzymes, vitamins and minerals and other nutrients, edible fibres, maltodextrin and any other ingredients as specified in Food Safety and Standards Regulations.

(iii) The grains and other ingredients used in the processing of products containing oats shall be of good quality and shall possess a characteristic taste and odour and shall be free from rancid, musty, sour and other undesirable tastes and odors.

2. Rolled or Flaked Oats and Products containing oats shall be free from insects, rodent excreta and other such foreign matters and shall comply with the requirements given in the table below:

Parameter	**Rolled/Flaked Oats**	**Products containing oats**
Moisture % by mass,	Not more than 12.0	Not more than 12.0
Ash insoluble in dilute HCl (on dry mass basis).	Not more than 0.1 percent	Not more than 0.5 percent
Protein content (conversion factor 6.25) on dry mass basis	Not less than 10.0 per cent	---
Crude Fibre on dry mass basis	Not more than 2.0 percent	---
Alcoholic acidity (with 90 percent alcohol) expressed as H_2SO_4,	Not more than 0.18 percent	Not more than 0.18 percent
Uric Acid, mg/kg,	Not more than 100	Not more than 100

3. Food Additives

The product may contain food additives permitted in the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 in Appendix A under appropriate Food Category(s) and those listed in GMP Table as applicable. The product may also contain 'Other substances for use in food products' permitted under regulation 3.3 as per appropriate Food category of the same regulation.]

[Amendment in force from 3rd November, 2021; FBOs to comply with the provisions by 1st June, 2022]

2.4.13 SOLVENT EXTRACTED FLOURS:

1.**SOLVENT EXTRACT SOYA FLOUR** means the product obtained from clean, sound healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine powder or grits, white to creamy white in colour of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:—

(a) Moisture	Not more than 9.0 per cent by weight
(b) Total ash	Not more than 7.2 per cent by weight on dry basis
(c) Ash insoluble in dilute HCl	Not more than 0.4 per cent by weight on dry basis.
(d) Protein (Nx6.25)	Not less than 48 per cent by weight on dry basis.
(e) Crude fibre	Not more than 4.2 per cent by weight on dry basis.
(f) Fat	Not more than 1.5 per cent by weight on dry basis
(g) Total bacterial count	Not more than 50,000 per gm.
(h) Coliform bacteria	Not more than 10 per gm.
(i) Salmonella bacteria	Nil in 25 gm
(j) Hexane (Food grade)	Not more than 10.00 ppm

2. **SOLVENT EXTRACTED GROUNDNUT FLOUR** means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of uniform composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely :—

(a) Moisture	Not more than 8.0 per cent by weight
(b) Total ash	Not more than 5.0 per cent by weight on dry basis
(c) Ash insoluble in dilute HCl	Not more than 0.38 per cent by weight on dry basis
(d) Protein(Nx6.25)	Not less than 48 per cent by weight on dry basis.
(e) Crude fibre	Not more than 5.0 per cent by weight on dry basis.
(f) Fat	Not more than 1.5 per cent by weight on dry basis
(g) Total bacterial	Not more than 50,000 per gm.count

(h) Coliform bacteria	Not more than 10 per gm.
(i) Salmonella bacteria	Nil in 25 gm
(j) Hexane (Food grade)	Not more than 10.00 ppm

3. **SOLVENT EXTRACTED SESAME FLOUR** means the product obtained by pressing, clean, sound healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely :—

(a) Moisture	Not more than 9.0 per cent by Weight
(b) Total ash	Not more than 6.0 per cent by weight on dry basis
(c) Ash insoluble in dilute HCl	Not more than 0.15 per cent by weight on dry basis.
(d) Protein (Nx6.25)	Not less than 47 per cent by weight on dry basis.
(e) Crude fibre	Not more than 6.0 per cent by weight on dry basis.
(f) Fat	Not more than 1.5 per cent by weight on dry basis
(g) Total bacterial count	Not more than 50,000 per gm.
(h) Coliform bacteria	Not more than 10 per gm.
(i) Salmonella bacteria	Nil in 25 gm.
(j) Oxalic Acid	Not more than 0.5 per cent by weight content on dry basis
(k) Hexane (Food grade)	Not more than 10.00 ppm.

4. **SOLVENT EXTRACTED COCONUT FLOUR** means the product obtained from fresh coconut Kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely :—

(a) Moisture	Not more than 9.0 per cent by weight
(b) Total ash	Not more than 6.0 per cent by weight on dry basis
(c) Ash insoluble in — dilute HCl	Not more than 0.35 per cent by weight on dry basis.
(d) Protein (Nx6.25)	Not less than 22.0 per cent by weight on dry basis.
(e) Crude fibre	Not more than 9.0 per cent by weight on dry basis.

(f)	Fat	Not more than 1.5 per cent by weight on dry basis
(g)	Total bacterial -	Not more than 50,000 per gm.count
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	- Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

5. **SOLVENT EXTRACTED COTTON SEED FLOUR** means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damage materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely :—

(a)	Moisture	Not more than 8.0 per cent by weight
(b)	Total ash	Not more than 5.0 per cent by weight on dry basis
(c)	Ash insoluble in dilute HCl	Not more than 0.35 per cent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 per cent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 per cent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 per cent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 per cent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade) -	Not more than 10.00 ppm."

2.4.14 STARCHY FOODS:

1. **ARROWROOT** means the separated and purified starch from the rhizomes of the plants known as Maranta arundinacea or from Curcuma augustifolia.

[40][2. (1) "Tapioca Sago" means the product made from the starch obtained from roots of tapioca (Manihot esculenta crantz syn. Utilissima). Tapioca Sago shall be hard, clean, wholesome globules or pearls of uniform colour, shape and size having characteristic taste and flavour.

(2) Tapioca Sago shall be free from insect infestation, live and dead insects, dirt, extraneous

matter, visible mould growth, and the product shall comply with the following standards, namely:—

Sl.No.	parameter	limit
1	Moisture (percent by mass), Max.	12.0
2	Total Ash (on dry matter basis), Max. percent	0.40
3	Acid insoluble ash (on dry matter basis), Max. percent	0.10
4	Starch (on dry basis), Min. percent	96.0
5	Protein (percent on dry matter basis), Max.	0.3
6	Crude fibre (percent on dry weight basis), Max.	0.20
7	pH of aqueous extract	4.5 to 7.0
8	Colour of gelatinized alkaline paste in the porcelain on the lovibond scale not deeper than	0.4R+1.5Y
9	Sulphur Dioxide content, Max.	100 ppm
10	Colouring matter	Absent

(3) This standard shall also apply to Palm Sago starch obtained from Sago Palm (Metroxylon sagu and M.rumphii).”]

2.4.15 BAKERY PRODUCTS:

[73]**[1. Biscuit.-** (1) Biscuit is a baked product leavened or non-leavened , coated or uncoated, center-filled partially or wholly such as but not limited to wafer biscuits, coated wafers, cookies, crackers, centre-filled biscuits, enrobed biscuits, sandwich biscuits, crème biscuit including fat free/ low fat or sugar free/ low sugar variants.

(2) Biscuit can be made from cereal and cereal products including millets/pulses/legumes and/ mixtures. It may also contain fats and oils, including fat emulsions etc. or mixture thereof, Baking powder , sugar and sugar products, edible common salt including salt substitutes, dairy products and analogues, nutritive and non-nutritive sweeteners, , honey, invert sugar, jaggery, dextrose, edible molasses, liquid glucose/glucose syrup (High Maltose/High fructose), fruits and vegetables and their products (including dried fruits and vegetables), cocoa and its products including chocolates, tea, coffee, chicory and their extracts, coconut and its products, eggs and egg products, gluten, nut and nut products, malt and malt products, milk and milk products, oilseeds and its products including oilseed flours, all edible starches and edible flours, spices, condiments, herbs and their extracts, seasonings, vinegar, edible seeds, protein concentrates/isolates, Yeast and its products including yeast extract, enzymes, nutrients like vitamins and minerals, edible fibres, maltodextrin, oligofructose, trehalose and any other ingredients as specified in Food safety and Standards Regulations.

(3) It shall conform to the following requirements, namely:-

TABLE

S. No.	Requirements	Limits
1	Ash insoluble in dilute HCl, % on dry mass basis, not more than	0.1
2	Acidity of extracted fat (as oleic acid), %, not more than	2.0

2. Bread and Bread-Type Products.-(1) Bread and bread type products such as rusks means the baked product prepared from a mixture of atta (whole wheat flour) and/or maida (refined wheat flour), water, salt, yeast or other fermentive medium or leavening medium. It includes the different varieties of breads, rusks etc.

(2) It may also contain dairy products and analogue, gluten, sweetening agents including honey (such as- sugar and sugar products, invert sugar, jaggery, dextrose, edible molasses, invert sugar, jaggery, liquid glucose/glucose syrup (High Maltose/High fructose), date syrup, malt products and their extracts, edible starches and flour, edible cereals, grains and pulses or their flour, products, semolina, edible seeds including oilseeds and their flour, edible bran, edible fibre rich ingredients or concentrates, trehalose (maximum 10%), coconut and coconut products, cocoa and products derived from cocoa, prebiotic, probiotic, egg and egg products, tea, coffee, chicory and their extract, protein concentrates and isolates, other minerals, nutrients, vitamins, vanaspati, margarine or refined edible oil of suitable type, Interesterified vegetable fat, or butter or ghee or their mixture or any other type of edible fat / oil, albumin, lime water, lysine, spices and condiments and their extracts, herbs, seasonings, fruit and fruit products, edible vegetable and vegetable Products, dry fruits, nuts and nut products , maltodextrin, oligofructose (maximum 15%) ,vinegar or any other ingredient as specified in Food Safety and Standards Regulations.

(3)It shall conform to the following requirements, namely:-

TABLE

S. No.	Requirements	Limits
1	Alcoholic acidity (with 90 percent alcohol) (for breads)	shall not be more than equivalent of 7.5 ml. 1N NaOH per 100 gram of dried substances
2	Acidity of extracted fat as oleic acid, % (for rusks), not more than	1.5
3	Ash insoluble in dilute HCl (% on dry mass basis), not more than	0.2

(4) It shall be free from dirt, insect and insect fragments, larvae, rodent hairs.]

[27][2.4.16 EXPELLER PRESSED FLOUR

1. Expeller Pressed Edible Groundnut Flour means the product obtained by expeller pressing fresh, clean degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be sorted and selected either by visual inspection, inspection under ultraviolet light, electronic sorting or by other means. The kernels shall be free from insect or fungal infestation. Expeller pressed edible groundnut flour shall be whitish to light brown in colour, uniform in composition and shall be free from insect or fungal infestation, objectionable odour and rancid taste. It shall not contain added flavouring and colouring agent or any other extraneous matter. It shall be free from castor husk or MAHUA oilcake. It shall be manufactured, packed, stored and distributed under hygienic conditions. It shall conform to the following standards, namely:-

Moisture Not more than 9.0 per cent. by weight.

Total ash	Not more than 4.5 per cent. by weight on dry basis.
Ash insoluble in dilute HCI	Not more than 0.35 per cent. by weight on dry basis.
Protein (Nx6.25)	Not less than 45 per cent. by weight on dry basis.
Crude fibre	Not more than 5.0 per cent. by weight on dry basis.
Fat	Not more than 9.0 per cent. by weight on dry basis.
Acid value of extracted fat	Not more than 4.0 per cent.

2. Food Additives

Only those food additives permitted under the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 shall be used.

3. Hygiene

The product shall be prepared and handled in accordance with the guideline provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulation, 2011 and such guidance as provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

4. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

The products covered in this standard shall conform to the Microbiological Requirements given in Appendix B of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

5. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.]

[73]**[2.4.17 Bajra Flour (Pearl Millet Flour).-**(1)— "Bajra flour (pearl millet flour)" means the product obtained from pearl millet grains (*Pennisetum americanum* L., *Pennisetum typhyoideum*, *Pennisetum glaucum***)** through a process of milling.

(2) It shall be free from abnormal flavours, odours, living insects, filth (impurities of animal origin including dead insects).

(3) It shall conform to the following requirements, namely:-

TABLE

S. No.	Requirements	Limits

1	Moisture (% by mass), not more than	13.0
2	Acid Insoluble Ash, % on dry mass basis, not more than	0.15
3	Protein (N×6.25)(percent on dry mass basis), not less than	8.0
4	Fat (% on dry mass basis), not more than	7.0
5	Crude Fibre (percent on dry mass basis), not more than	2.5
6	Alcoholic acidity (with 90 per cent. alcohol) expressed as H_2SO_4, % on dry mass basis, not more than	0.25
7	*Particle Size	shall pass through 1mm sieve (18 mesh)
8	Uric acid (not more than), mg/kg	100

* The parameter 'Particle size' will not be applicable for intermediate products which are not meant for direct consumption.]

[73]**[2.4.18 Jowar Flour (Sorghum Flour). -(**1) Jowar Flour (Sorghum Flour) means the product obtained from grains of *Sorghum bicolor* (L.) moench through a process of milling.
(2) It shall be free from abnormal flavours, odours, living insects, filth (impurities of animal origin including dead insects).
(3) It shall conform to the following requirements, namely: -

TABLE

S. No.	**Requirements**	**Limits**
1	Moisture (% by mass), not more than	12.0
2	Acid Insoluble Ash, % by mass (on dry basis), not more than	0.15
3	Protein (N×6.25), % on dry mass basis, not less than	8.5
4	Crude fat, % on dry mass basis, not more than	4.7
5	Alcoholic acidity (with 90 percent alcohol) expressed as H_2SO_4, % on dry mass basis, not more than	0.18
6	Particle size	Minimum 80 per cent shall pass through a 1 mm sieve (18 mesh)

7	Uric acid (Not more than), mg/kg	100

* The parameter 'Particle size' will not be applicable for intermediate products which are not meant for direct consumption.]

[48][2.4.19. Soybean

(1) Soybean shall be obtained from the plants of *Glycine max* (L.) Merr. , which shall be mature, clean and dried seeds free from mould and musty odour and shall also be free from non-edible and toxic seeds.

(2) The product shall conform to the following standards, namely:-

Parameters	Limits
Moisture (per cent. by mass), Maximum	12.0
Extraneous Matter	Not more than 1.0 per cent by weight of which not more than 0.25 per. cent by weight shall be mineral matter and not more than 0.10 per cent. by weight shall be impurities of animal origin.
Organic per cent. (Maximum percentage)	
Inorganic (Maximum percentage)	
Other edible grains (per cent. by mass), Maximum	1.0
Immature, Shriveled and green seeds (per cent. by mass), Maximum	6.0
Weevilled Seeds by count (no. of grains/100g) (Maximum percentage)	2
Damaged or split or cracked seed (per. cent by mass), Maximum	4.0
Oil content (per. cent on dry basis),Minimum percentage	13.0
Acid Value of extracted oil (Maximum)	2.5

Uric acid (mg per kg), Maximum	100

(3) Food additives

The product may contain food additives permitted in Appendix A.

(4) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

(5) Food hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(6) Packaging and labelling

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(7) Method of Analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.

2.4.20. Soy Protein Products

(1) Soy Protein Products (SPP) means the food products obtained by the reduction or removal from soybeans of the major non-protein constituents (water, oil, carbohydrates), which shall be clean, sound, mature and dry seeds. The Soy Protein Products so obtained shall be of following three types, namely:-

(a) Soy Protein Flour (SPF);
(b) Soy Protein Concentrate (SPC); and
(c) Soy Protein Isolate (SPI).

Optional Ingredients (which are standardised in various regulations under Food Safety and Standards Act, 2006(34 of 2006):-

(a) Carbohydrates, including sugars;

(b) Edible fats and oils;

(c) Other protein products;

(d) Vitamins and minerals;

(e) Salt; and

(f) Herbs and spices.

(2) The product shall conform to the following standards, namely:-

Parameters:	Limits		
	SPF	SPC	SPI
Moisture (per cent. by mass), Maximum	10.0	10.0	10.0
Crude Protein (per cent. on dry mass basis) *	more than 50.0 and less than 65.0	more than 65.0 and less than 90.0	More than 90.0
Total Ash (per cent. on dry mass basis), Maximum	8.0	8.0	8.0
Crude Fibre (per cent. on dry mass basis), Maximum	5.0	6.0	0.50

Note:- * The protein content is calculated on dry mass basis excluding added vitamins, mineral, amino acids and food additives.

(3) Food additives

The product may contain Food Additives permitted in Appendix A.

(4) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

(5) Food hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(6) Packaging and labelling

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(7) Method of analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.

2.4.21. Whole Maize (Corn) Flour

(1) Whole Maize (Corn) Flour is prepared from fully mature, sound, ungerminated, whole kernels of maize, *Zea mays* L., by a grinding process in which the entire grain is comminuted to a suitable degree of fineness and in the said preparation, coarse particles of the ground maize kernel may be separated, reground and recombined with all of the material from which they were separated.

(2) The product shall be free from abnormal flavours, odours, living insects and filth (impurities of animal origin, including dead insects).

(3) The product shall conform to the following standards, namely:-

Parameters	Limits
Moisture (per cent. by mass), Maximum	13.0
Ash (per cent. on dry mass basis), Maximum	3.0
Protein (NX6.25) (per cent. on dry mass basis), Minimum	8.0
Crude Fat (per cent. on dry mass basis), Minimum	3.1
Particle size	95 per cent. or more of the whole maize flour shall pass through a 1.19 mm sieve (16 mesh)

(4) Food additives

The product may contain food additives permitted in Appendix A.

(5) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

(6) Food hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(7) Packaging and labelling

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(8) Method of analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.

2.4.22. Wheat Protein Products including Wheat Gluten

(1) Wheat Protein Products (WPP) are produced from wheat or wheat flour by separation of certain non-protein constituents such as starch and other carbohydrates, and-

(a) vital wheat gluten is characterised by its property of high viscoelasticity as hydrated;

(b) devitalized wheat gluten is characterized by its reduced property of viscoelasticity as hydrated due to denaturation; and

(c) solubilized wheat proteins are characterized by their reduced property of viscoelasticity as hydrated due to partial hydrolysis of wheat gluten.

(2) The optional ingredients for solubilised wheat proteins are carbohydrates, including sugars, edible fats and oils, other protein products, amino acids, vitamins and minerals, salt, herbs and spices and enzymes may also be added.

(3) The product shall conform to the following standards, namely:-

Parameters	Limits

(4) Food additives

Moisture (per. cent by mass), Maximum	10.0
Crude Protein (N 6.25)(per cent. on dry mass basis) ,Minimum	
(I) Vital and devitalized wheat gluten	80.0
(II) Solubilized wheat proteins	60.0
Total Ash (per cent. on dry mass basis), Maximum	
(I) Vital and devitalized wheat gluten	2.0
(II) Solubilized wheat proteins	10.0

The product may contain food additives permitted in Appendix A.

(5) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

(6) Food hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(7) Packaging and labelling

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(8) Method of analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.

2.4.23. Durum Wheat Semolina and Whole durum wheat semolina

(1) Durum wheat semolina is the product prepared from grain of durum wheat (*Triticum durum* Desf.) by grinding or milling processes in which the bran and germ are essentially removed and the remainder is comminuted to a suitable degree of fineness.

(2) Whole durum wheat semolina is prepared by a similar comminuting process, but the bran and part of the germ are retained.

(3) The product shall conform to the following standards, namely:-

Parameters	Limits	
	Durum Wheat Semolina	Whole Durum Wheat Semolina
Moisture (per cent. by mass), Maximum	12.0	12.0
Total Ash (per cent. on dry basis), Maximum	1.3	2.1
Acid insoluble ash (per cent. on dry basis), Maximum	0.1	0.1
Protein (N x 5.7) (per cent. on dry matter basis), Minimum	10.5	11.5
Alcoholic Acidity (with 90 per cent. alcohol expressed as H_2SO_4) (Maximum percentage)	0.18	0.18
Particle size	Maximum 80 per cent. shall pass through a 500 micron silk guaze or man made textile sieve	Maximum 80 per cent. shall pass through a 500 micron silk guaze or man made textile sieve -
Uric acid (mg per kg), Maximum	100	100

(4) Food additives

The product may contain food additives permitted in Appendix A.

(5) Contaminants, toxins and residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

(6) Food hygiene

(a) The product shall be prepared and handled in accordance with the guidance provided in Schedule 4 to the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006(34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

(7) Packaging and labelling

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

(8) Method of analysis

As provided in the relevant Food Safety and Standards Authority of India Manual on Analysis of Food.**]**

[51][**2.4.24. Degermed Maize (Corn) Meal and Maize (Corn) Grits**: (1) Degermed maize (corn) meal are prepared from fully mature, cleaned, free from mould degermed kernels of maize (corn), *Zea mays* L., by a grinding process in which the grain is comminuted to a suitable degree of fineness and from which bran and germ are removed. In its preparation, coarse particles of the ground maize kernel may be separated, reground and recombined with all of the material from which they were separated.

(2) Degermed maize (corn) grits are prepared from fully mature, cleaned, free from mould, kernels of maize (corn), *Zea mays* L., by a grinding process in which the grain is comminuted to a suitable degree of fineness and from which bran and germ are almost completely removed.

(3) Degermed Maize (Corn) Meal and Maize (Corn) Grits shall be free from abnormal flavours, odours, living insects and filth (impurities of animal origin, including dead insects).

(4) The Degermed Maize (Corn) Meal and Maize (Corn) Grits shall conform to the following standards:

Sl. No.	Parameter	Limit

(I)	Moisture (per cent. by mass), Max.	14
(II)	Ash (on dry matter basis), Max per cent.	1
(III)	Protein (Nx6.25) (on dry matter basis), Min per cent.	7
(IV)	Crude Fat (on dry matter basis), Max per cent.	2.25
(V)	Particle size (i) degermed maize meal	95 per cent. or more shall pass through a 0.85 mm sieve(20 mesh); -and- 45 per cent. or more shall pass through a 0.71 mm sieve(25 mesh); -and- 25 per cent. or less shall pass through a 0.210 mm sieve(70 mesh)
	(ii) degermed maize grits	95 per cent. or more shall pass through a 2.00 mm sieve(10 mesh); -and- 20 per cent. or less through a 0.71 mm sieve(25 mesh),

Note: The parameter 'Particle size' will not be applicable for intermediate products not for direct consumption.

2.4.25.(1) Couscous is obtained from durum wheat semolina *(Triticum durum)* the elements of which are bound by adding potable water and which has undergone physical treatment such as cooking and drying.

(2) Couscous may be prepared from a mixture of coarse and fine semolina and it can also be prepared from "coarse medium" semolina which shall be clean and safe.

(3) Semolina proportions in the mixture intended for the preparation of couscous are:

(I) 20–30per cent. for fine semolina;

(II) 70–80per cent. for coarse semolina.

(4) "Coarse medium" semolina obtained from a mixture of:

(I) 25–30per cent. for coarse semolina;

(II) 70–75per cent. for medium semolina.

(5) The Couscous shall conform to the following standards:

Sl. No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	13
(II)	Ash (on dry matter basis), Max per cent.	1.1
(III)	Granularity (microns)	min. 600(0.60 mm= 30 mesh) microns to max. 2000 microns (2.0 mm= 10 mesh), with a tolerance of 6 per cent. .

2.4.26. (1) Tempe is a compact, white, cake-form product, prepared from dehulled boiled soybeans through solid state fermentation with *Rhizopus* spp.

(2) Product covered by this standard shall consist of the following ingredients:

(I) Soybean (any variety);

(II) Mould of *Rhizopus* Spp. (*R.oligosporus, R. oryzae* and/ or *R. stolonifer*) mix with Cooked rice powder, rice bran powder and/ or wheat bran powder as an inocula.

It shall conform to the following standards, namely:-

S.No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	65
(II)	Protein Content (on dry matter basis), Min per cent.	15
(III)	Fat Content (per cent. on dry mass basis), Min.	7
(IV)	Crude Fibre (per cent. on dry mass basis) Max	2.5
(V)	Urease Index Value	0.05-0.2 pH Units rise

2.4.27. Textured Soy Protein (Soy Bari or Soy Chunks or Soy Granules) is obtained by extrusion of defatted soy flour or grits.

Textured Soy Protein shall conform to the following standards,namely:-

S.No.	Parameter	Limits
(I)	Moisture (per cent. by mass), Max.	7
(II)	Protein (N x 6.25) (per cent. on dry matter basis), Min.	50
(III)	Fat (per cent. not more than) on dry mass basis	1
(IV)	Total Ash (per cent. on dry mass basis), Max.	8
(V)	Crude Fiber (per cent. on dry mass basis) Max.	3.5
(VI)	Acid Insoluble Ash (per cent. on dry mass basis), Max.	0.3
(VII)	Hexane, Max.	10 ppm
(VIII)	Urease Index Value	0.05-0.2 pH Units rise

2.4.28. Sago flour is the product prepared from the pith or soft core of sago palm tree (*Metroxylon sp*.) or the Sago of Tapioca (*Manihot utilissima*). The product shall be free from off-flavours and odours. It must be free from filth (impurities of animal origin including insects) and other extraneous matters. Colour shall be white to light-brown.

Sago flour shall conform to the following standards, namely:-

S.No.	Parameter	Limit
(I)	Moisture (Not more than) , per cent. by mass	13

(II)	Ash Inorganic extraneous matter(Not more than) , per cent. by mass	0.5
(III)	Acidity (mg KOH/100g) (Not more than) , per cent. by mass	220
(IV)	Starch content (Not less than) , per cent. by mass	96
(V)	Crude fibre (Not more than) , per cent. by mass	0.2
(VI)	Particle size	Not less than 95 per cent. flour shall pass through a 100 mesh sieve.]

[64] [**2.4.29. Wheat bran**.- Wheat bran is the outer layer of the grain. It consists of the combined pericarp and aleurone. It may have adhering endosperm of the wheat kernel. It shall be free from musty and stale odour or sourness and from lumps, dirt and extraneous matter including metallic pieces. It shall be free from fungus or insect infestation. It shall be light brown in colour.

It shall conform to the following standards:

Parameter	Limits
Moisture, % by mass, Not more than	12.5
Crude Protein on dry basis (N*6.25), % by mass, Not less than	9.0
Crude Fibre, % by weight, Not more than	12.0
Acid Insoluble Ash on dry basis, % by mass. Not more than	0.25
Acid value , Not more than	6

2.4.30. Non- fermented soybean products.-

1. Non – fermented soybean products are the products, the main ingredients of which are the soybean or soy derivatives or both, (e.g. soybean flour, soybean concentrates, soybean isolates or defatted soya) and water and are produced without fermentation process. It shall have the characteristic flavour, color and texture of the product without any visible foreign matters in the products.

(1). **Soybean Beverages and Related Products:**

(a) **Plain soybean beverage**: Plain soybean beverage is the milky liquid, prepared from soybeans by eluting protein and other components in hot/cold water or other physical means, without adding optional ingredients. Fibres can be removed from the products.

(b) **Composite or mixed or flavoured soybean beverages**: Composite or mixed or flavoured soybean beverages are the milky liquid, prepared by adding optional ingredients to plain soybean beverages. It includes products such as sweetened soybean beverages, spiced soybean beverages, salted soybean beverages.

(c) **Soybean** - based beverages: Soybean - based beverages are the milky liquid products prepared by adding optional ingredients to soybean beverages, with lower protein content than composite/flavoured soybean beverages.

(2). **Soybean Curd and Related Products**:

(a) **Semisolid soybean curd**: Semi solid soybean curd is the semisolid product in which soybean protein is coagulated by adding coagulant into the soybean liquid. It may be coagulated using magnesium chloride (nigari), calcium sulfate, calcium chloride, citric acid, acetic acid, magnesium sulfate and glucono -δ- lactone.

(b) **Soybean curd**: Soybean curd is the solid product with higher water content, and is made from soybean liquid and coagulated by adding coagulant. It may be coagulated using magnesium chloride (nigari), calcium sulfate, calcium chloride, citric acid, acetic acid, magnesium sulfate and glucono -δ- lactone.

(3). **Compressed Soybean Curd**.- Compressed soybean curd is partially dehydrated soybean curd, of which the water content is much lower than Soybean curd and has a chewy texture.

(4). **Dehydrated Soybean Curd Film**.- Dehydrated soybean curd film is obtained from the uncovered still surface of soybean liquid preparation, with or without folding up, which will be dehydrated. It may be dipped in salt solution prior to dehydration.

(5). **Tofu**.- (a) Tofu is made by coagulating milky liquid obtained from soybean, and then pressing into soft white blocks. The milky liquid may be coagulated using magnesium chloride (nigari), calcium sulfate, calcium chloride, citric acid, acetic acid, magnesium sulfate and glucono -δ- lactone, reagents either in combination or individually. The product may contain spices or herbs whose standards are prescribed in sub – regulation 2.9 of Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

(b) It shall conform to the following standards:

Parameters	Limits
Moisture (% by mass), Max.	76.0
Total Ash (% by mass), Range	0.3-2.0
Protein (on dry basis) % by mass, Min.	8.0
Fat (% by mass), Range	2.0-5.0
Crude fiber (on dry basis) % by mass, Range	0.5-6.0
Titrable acidity Max. (as LACTIC ACID) %	1.5
Urease Index Value	0.05-0.2 pH Units Rise

2. Permitted ingredients for products covered under sub-clause (1) to (4):

(a) Basic Ingredients:

(i) Soybean or soy derivatives, or both,
(ii) Water

(b) Optional ingredients:

(i) Edible oil
(ii) Sugars
(iii) Edible Salts
(iv) Spices, seasoning and condiments
(v) Other ingredients as appropriate

All the above mentioned ingredients shall conform to their respective standards as provided under these regulations.

3. Products covered under sub-clause (1) to (4) shall conform to the following standards:

Parameter	Requirements						
	Soybean Beverages and Related Products			Soybean Curd and Related Products		Compressed Soybean Curd	Dehydrated Soybean Curd Film
	Plain soybean beverage	Composite/ Mixed/flavoured soybean beverages	Soybean - based beverages	Semisolid soybean curd	Soybean curd		
Moisture, g/100g	-	-	-	Not less than 92.0	Not more than or equal to 92.0	Not more than or equal to 75.0	Not more than or equal to 20.0
Protein, g/100g	Not less than or equal to 2.0	Not less than or equal to 2.0	Not less than or equal to 0.8 but not more than 2.0	Not less than or equal to 2.5	Not less than or equal to 3.5	Not less than or equal to 13.0	Not less than or equal to 30.0
Urease Index Value	0.05-0.2 pH Units Rise	0.05-0.2 pH Units Rise	0.05-0.2 pH Units Rise	0.05-0.2 pH Units Rise	0.05-0.2 pH Units Rise	0.05-0.2 pH Units Rise	0.05-0.2 pH Units Rise.]

[66][**2.4.31. Cassava or Tapioca product (Gari)** .- (1) Cassava orTapioca product (Gari) is the finished product obtained by artisanal or industrial processing of cassava tubers (*Manihot esculenta Crantz*).

(2) The processing consists of peeling, washing and grating of the tubers, followed by fermentation, pressing, fragmentation, granulation, drying if necessary, sifting and suitable heat treatment.

(3) The product is presented as flour of variable granule size and shall be free from abnormal flavours, odours, and living insects.

(4) It shall conform to the following standards, namely:-

S.No.	Requirements	Limits
(i)	Moisture, per cent. by mass (Not more than)	12.0
(ii)	Extraneous matter	Not more than 1 per cent. by mass of which not (Extraneous matter) more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent. by mass shall be impurities of animal origin
(iii)	TOTAL ACIDITY, per cent. determined as lactic acid (Range)	0.6 – 1.0
(iv)	Crude fiber per cent. (Not more than)	2.0
(v)	Total Ash, per cent. (Not more than)	2.75
(vi)	Acid insoluble ash in dilute HCl (per cent. on dry mass basis), not more than	0.5
(vii)	Extra-fine Cassava or Tapioca product (Gari)	minimum 100 per cent. by mass shall pass through a 0.50 mm sieve and minimum 40per cent. by mass shall pass through a 0.25 mm sieve
(viii)	Fine Cassava or Tapioca product (Gari)	minimum 100per cent. by mass shall pass through a 1 mm sieve and maximum 40per cent. by mass shall pass through a 0.5 mm sieve
(ix)	Medium Cassava or Tapioca product (Gari)	minimum 100per cent. by mass shall pass through a 1.25 mm sieve and maximum 40per cent. by mass shall pass through 1.00 mm sieve
(x)	Coarse Cassava or Tapioca product (Gari)	minimum 100per cent. by mass shall pass through a 2 mm sieve and maximum 40per cent. by mass shall pass through a 1.25 mm sieve

2.4.32. Edible Cassava or Tapioca Flour-(1) Edible cassava or Tapioca (*Manihot esculenta Crantz*) flour is the product prepared from dried cassava chips or paste by a pounding, grinding or milling process, followed by sifting to separate the fibre from the flour.

(2) In case of edible cassava or tapioca flour prepared from bitter cassava (*Manihot utilissima Pohl*), detoxification is carried out by soaking the tubers in water for a few days, before they undergo drying in the form of whole, pounded tuber (paste) or in small pieces.

(3) It shall conform to the following standards, namely:-

S.No.	Requirements	Limits
(i)	Moisture, per cent. by mass (Not more than)	13.0
(ii)	Crude fiber, per cent. (Not more than)	2.0
(iii)	Total Ash, per cent(Not more than)	3.0
(iv)	Acid insoluble ash in dilute HCL (per cent. on dry weight basis), not more than	0.5
(v)	PARTICLE SIZE Fine flour Coarse flour	 minimum 90 per cent. shall pass through a 0.60 mm sieve minimum 90 per cent. shall pass through a 1.20 mm sieve

2.4.33. Roasted Bengal Gram Flour (Chana Sattu)-(1)*Sattu* shall be obtained from clean, washed, dried and sound grains of gram (*Cicer arietinum*) after grinding of roasted form. (2) It shall be of uniform color, having characteristic taste, smell and flavour associated with the product and shall be free from insect infestation, live and dead insects, insect fragments, mould or mites, and larvae; free from rodent hair and excreta; fermented and musty odour, or any objectionable odour.

(3) It shall also be free from extraneous matter or any other adulterant and fungal contamination.

(4) It shall conform to the following standards, namely:-

S.No.	Requirements	Limits
(i)	Moisture, per cent. by mass, not more than	8.0
(ii)	Acid insoluble ash (dry basis), per cent. by mass, not more than	0.5
(iii)	Alcoholic acidity, per cent. by mass, not more than	0.15
(iv)	Crude fibre(on dry basis), per cent. by mass, not more than	3.0

(v)	Crude protein (Nx6.25), per cent. by mass(on dry basis), not less than	20.0
(vi)	Particle size*	100 per cent. pass through 35 mesh sieve.
(vii)	Uric acid (mg per kg), not more than	100

* Note: - The parameter "Particle size" shall not be applicable for intermediate products which are not meant for direct consumption.

2.4.34. Ragi Flour.-(1)Ragi flour is the product obtained from dried mature grains of *Eleusinecoracana L. Gaertn.* through a process of milling, which shall be free from added colouring matter, flavouring substances, moulds, weevils, obnoxious substances, discolouration, and all other impurities except to the extent indicated below and shall also be free from rodent hair and excreta.

(2) It shall conform to the following standards, namely:-

S.No.	Requirements	Limits
(i)	Moisture, per cent. by mass, not more than	10.0
(ii)	Crude fiber, per cent. by dry mass basis, not more than	4.5
(iii)	Crude protein, per cent. on dry mass basis (NX6.25), not less than	7.0
(iv)	Acid insoluble ash, per cent. on dry mass basis, not more than	0.15
(v)	Particle Size, per cent.	Shall pass through a 1mm sieve (18 mesh)
(vi)	Uric acid (mg per kg), maximum	100

* The parameter "Particle size" shall not be applicable for intermediate products which are not meant for direct consumption.]

[73]**[2.4.35 Breakfast Cereal -** (1) Breakfast cereal refers to ready to eat and quick or regular cooking cereal products. Examples include: puffed, powdered, flaked, cereals or grains, multi-grain (e.g. rice, wheat, oats, millets, barley, pulses, corn etc.) breakfast cereals, ready to eat or cook cereal products made from soy or edible bran, granola-type breakfast cereals, cereal bars, muesli and extruded-type breakfast cereals made from grain flour or powder or meals. This category also includes ready to eat or instant cooking broken or flattened cereals sold as porridge.

(2) Breakfast cereals can be prepared by one or more methods involving cooking, frying, flaking, baking, roasting, puffing, pearling and extruding or co -extruding etc. with chocolate, fruit, vegetables, nuts or any other such nutritious fillings in sweet or savoury taste.
(3) Breakfast cereals shall be prepared from one or more of milled/whole grains and it can be mixed with the products of one or more of legumes, seeds, edible tubers or pseudo-cereals with or without addition of suitable flavoring agents, spices or spice extracts, seasonings, malt derivatives, nutritive and natural sweeteners, salt, dried or candied fruits, fruit solids/ extracts or concentrates, vegetables and their dried formats or extracts, nuts, cocoa and its products, maltodextrin, milk and its derivatives and any other ingredients as specified in Food Safety and Standards regulations.
(4) In case of wholegrain breakfast cereal minimum amount of whole grain shall be 25% on dry weight basis. The product shall contain cereals/pseudo cereals/grains when taken together as the first ingredient in the ingredient list
(5) The grains and other ingredients used in the processing of breakfast cereals shall be of good quality and shall possess a characteristic taste and odor and shall be free from rancid, musty, sour and other undesirable tastes and odors.
(6) Breakfast cereals shall be free from insects, rodent excreta and other such foreign matters.
(7) It shall conform to the following requirements, namely: -

TABLE

S. No.	Requirements	Limits
1	Moisture content (% by mass), not more than	Products containing dehydrated/candied fruits, seeds, nuts , whole grains etc. –10.0% All others - 7.5%
2	Acid insoluble ash in dilute HCl (% on dry mass basis), not more than	0.1]

Amendment for insertion of new provision

[75][2.4.36 YELLOW PEA POWDER

Description

Yellow Pea Powder means the product obtained by grinding dehusked Yellow Pea (*Pisumsativum* L.) and shall not contain any added colouring matter or any other foreign ingredient. It shall conform to the following standards: —

S. No.	Parameters	Limits
1.	Moisture, % by mass, Not more than	12.0
2.	Protein (on dry basis), % by mass, Not less than	22.0
3.	Acid Insoluble Ash (on dry basis), % by mass, Not more than	0.3

4.	Alcoholic Acidity,% (Not more than)	0.18
5.	Uric Acid, mg/kg, Not more than	100]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

Amendment for insertion of new provision

[77][2.4.37 Multigrain flour (*atta*)

1. Multigrain flour (Atta) : Multigrain flour (*atta)*–means the product obtained by milling/grinding blend of clean whole wheat and other permitted ingredients or mixing their flours. The product shall have flour composition obtained from whole wheat ranging from 50-90 % and rest of the flour (10% - 50%) composition shall be from other permitted ingredients singly or in combination. The product shall be free from abnormal flavours, odours, living insects, visible mould, filth (impurities of animal origins, including dead insects).
2. Other Permitted Ingredients. – Processed Soybean**,** Cereals, Pulses, Millets, Psyllium husk, Gluten, wheat bran and fenugreek seeds.

3. It shall conform to the following standards:

S. No.	Parameters	Limit
1.	Moisture, % by mass, Not more than	13.0
2.	Acid Insoluble Ash on dry basis, % by mass, Not more than	0.15
3.	Gluten, % by mass (on dry basis), Not less than	3.0
4.	Protein (N x 6.25), % by mass (on dry basis), Not less than	10.0
5.	Total Dietary Fiber, % by mass (on dry basis), Not less than	12.0
6.	Alcoholic acidity, % on dry mass basis, Not more than	0.18
7.	Particle size, Not less than	98% shall pass through 40 mesh
8.	*Urease activity(pH units rise), Not More Than	0.02

9.	Uric acid, mg/kg, Not more than	100

*The test of urease activity is applicable in case soya is used.

4. Percentage of Wheat flour (Atta) in the product shall be declared on the label.

2.4.38 Mixed Millet Flour

1. Mixed millet flour means the product obtained by milling /grinding blend of clean millets/pseudomillets or by blending flour obtained from clean millets. The product shall be free from abnormal flavours, odours, living insects, visible mould and filth (impurities of animal origins, including dead insects).

   Note: - Millets/pseudomillets are Sorghum/ Jowar (Sorghum bicolor), Pearl Millet / Bajra (Pennisetumglaucum) , Finger Millet/ Ragi/Mandua (Eleusinecoracana),Foxtail Millet/Kanngani/kakun (Setariaitalica), Proso Millet/ Cheena (Panicummilliaceum), Kodo Millet/ Kodo (Paspalumscrobiculatum), Barnyard Millet/ Sawa/Sanwa/Jhangora (Echinochola crus-galli) , Little Millet/ Kutki (Panicumsumatrense) , Brown top millet (Brachiariaramosa)and pseudo-millets areBuck wheat / Kuttu (Fagopyrumesculentum), Amaranth/ Chaulai (Amaranthuscruentus).

2. It shall conform to the following standards, namely: -

S. No.	Parameters	Limits
1.	Moisture, % by mass, Not more than	11.0
2.	Acid Insoluble Ash on dry basis, % by mass, Not more than	0.15
3.	Protein (N x 6.25), % by mass (on dry basis), Not less than	8.0
4.	Alcoholic acidity, % by mass (on dry basis), Not more than	0.18
5.	Total Dietary fiber, % by mass (on dry basis), Not less than	12.0
6.	Particle size, Not less than	98% should pass through 40 mesh
7.	Uric acid, mg/kg, Not more than	100]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

2.5. MEAT AND MEAT PRODUCTS

2.5.1 Definition:

(a)"animal" means an animal belonging to any of the species specified below;-

(i) Ovines;

(ii) Caprines;

(iii) Suillines;

(iv) Bovines;

(v) [34][Domestic rabbits (*Oryctolagus cuniculus*)]

and includes poultry and fish

[72][(b) "carcass" means the body of any slaughtered food animal after bleeding and dressing;

(c) "meat" means all edible parts (including edible offal) of any food animal slaughtered in an abattoir that are intended for or have been judged as safe and suitable for, human consumption;

(d) “offal” means all the body parts of slaughtered food animals other than carcass;

(e) “edible offal tissue” are those parts of an animal apart from meat from the carcass that are considered fit for human consumption;

(f) "meat food products" means any product prepared from meat and other ingredients through various processing methods in which meat should be the major ingredient of all the essential ingredients but shall not include the following products:

(i) Meat extracts, soup, stock and meat sauces;

(ii) Products containing fragments of meat, but which contain a quantity of meat or meat product not exceeding ten percent of the total weight of the final product;

(g) “slaughter” means killing of food animals for human consumption in an authorized slaughterhouse;

(h)“Slaughter house/ abattoir”means a licensed place/ building/ premises where food animals are slaughtered humanely in hygienic manner with proper ante-mortem and post-mortem inspection by veterinarian for human consumption;

(i) “Egg” means eggs-in-shell other than broken, incubated or cooked eggs, laid by poultry species or birds meant for direct human consumption or for the preparation of egg products.]

2.5.2 Meat and Meat Products:

[65]**[1. Canned or Retort Pouch Meat Products.-**

(1) The standards specified in this clause shall apply to thermally processed shelf stable products designated as canned or retort pouch meat products.

(2) Canned or retort pouch meat products means the meat products packed in hermetically sealed containers or pouches which have been thermally processed at specified temperature, pressure and time combination followed by rapid cooling to render the product shelf stable.

(3) It may be processed by any of the following process, namely: -

(a) **Canning or retorting:** Meat or meat product is packed in air tight cans, retort pouches or any other containers suitable to the products and processed in thermal processing equipment to specified temperature, pressure and time combination to render the product commercially sterile. The sealed containers shall not show any changes on incubation at 35°C for 10 days or 55°C for 5 days.

(b) **Retort pouch or containers:** Retort pouches or containers are flexible laminates made of metal or plastic foils. They can withstand high temperature processing and are used as an alternative to cans for production of shelf stable-meat products.

(c) **Commercial sterility:** It is a condition achieved by application of heat which renders the product free of viable forms of microorganisms having public health significance as well as other microorganisms of non-health significance capable of reproducing in the food under normal non-refrigerated conditions of storage and distribution. F value required for achieving commercial sterility of different product will be different based on pH of the product, consistency and composition. F_0 value of the product to be canned or retort processed must be standardised prior to production and marketing of the products.

(4) Explanations. - for the purpose of this sub-clause, -

(a) F Value means the common parameter used for measuring lethality of the heat treatment.
(b) F_0 value indicates minutes required destroying a stated number of microorganisms at a defined temperature; usually 121 °C.

(5) These products may contain only those ingredients which are either standardised or permitted for use in the preparation of other standardised food under these regulations.

(6) The product may contain Food Additives as per Appendix A.
(7) The product shall conform to the microbiological requirement given in Appendix B.

2. **Comminuted or Restructured Meat Products. -**

(1) The standards specified in this clause shall apply to raw or cooked comminuted or restructured meat products which have been packed in any suitable packing material. This category describes several processing steps (e.g., grinding, cutting, dicing, sectioning, flaking, chunking, slicing, mincing, chopping), ingredients, machineries and cooking methods for processing of comminuted or

restructured meat products including mechanically deboned or separated meat products. It is broadly classified into comminuted or emulsion and restructured meat products.

(2) Comminuted meat products means boneless meat which has been subjected to particle size reduction by cutting or grinding or dicing or chopping or milling or marinated, or both and with or without additives. This category also includes meat emulsions or batters which are finely comminuted meat products containing true solutions, gels, emulsified fat and air. An emulsion is defined as mixture of two immiscible liquids, one of which is dispersed in the form of small droplets or globules in the other liquid.

(3) Comminution is a process by which particle size is reduced for incorporation of meat raw materials into finished products. Comminuted or Emulsion meat products are made by chopping meat and water with the addition of common salt (NaCl) until a fine, protein-rich slurry is formed. This matrix is then capable of binding fat, water and other non-meat ingredients. After cooking, the salt soluble proteins are coagulated and this results in an immobilisation of the fat, water and other constituents. The basic structure of a meat emulsion is a mixture of finely divided meat constituents dispersed as a fat-in-water emulsion, where the discontinuous phase is fat and the continuous phase is water containing solubilised protein components. After cooking, these products can also be smoked.

(4) Restructured meat products means meat or meat products that have been ground, flaked, or chopped and formed into steak or chop or any other shape with a texture that is closer to that of an intact steak than that of ground meat.

(5) Restructured meat products are prepared by flaking, grinding or chopping meat so that it is formed into steak or chop like products with texture closer to intact meat. Chunked, ground, diced or flaked meat pieces are used in restructured products wherein the meat pieces bind each other with proteins extracted through mechanical action using tumbling or blending or massaging. Alternatively it can be restructured using a small amount of meat emulsion or non-meat binders along with salt, phosphates and other ingredients.

(6) These products shall be prepared from meat, mechanically deboned or separated meat or edible by products from meat animals or poultry.

(7) These products may also contain those ingredients which are either standardised or permitted for use in the preparation of other standardised food under these regulations and includes but not limited to the following ingredients, namely:-

(a) Trimmings, fat, skin, edible by-products, mechanically recovered meat (MRM) or mechanically deboned meat (MDM). There is no limit on usage of MRM derived from poultry. However, for MRM derived from other food animal, the usage limit is limited to 20% of the meat portion of the product.;

(b) Water, herbs, sugar, spices, preservatives, condiments, stabilizers, hydrolysed vegetable protein;

(c) Carbohydrate and protein binders such as,-

(i) milk powders, caseinate, whey powder, egg protein, vegetable protein products;
(ii) meal, flour, fibres or starch prepared from cereal, grain, potato or sweet potato;
(iii) rusk, bread, biscuit or bakery products;
(iv) sucrose (sugar and brown cane sugar), dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup);
(v) Other Dairy products and analogues;

(d) Fats, oils and fat emulsions;

(e) Fruits, vegetables, Fruit and vegetable juices, Fruit and vegetable nectars and protein products derived from vegetable sources such as soya beans;

(f) Cereal and cereal products;

(g) Egg and Egg products;

(h) Sweetening agents including honey (Excluding artificial Sweeteners);

(i) Salt and salt substitutes, Black Salt, Herbs, Spices, Masalas, seasonings and condiments, Vinegar, Mustards, sauces and like products; Yeast and like products, Soybean based seasonings and condiments;

(j) Water soluble hydrolysed protein;

(k) Carrageenan, Gellan gum, Guar gum, Gum Arabic (Acacia gum), Karaya Gum, Konjac Flour, Cellulose gel, Processed Eucheuma Seaweed, Sodium Carboxymethyl Cellulose, Xanthan gum;

(8) The final product shall comply with the following requirements, namely:-

(a) These products shall have minimum of 50% meat (including lean meat, fat and edible offals). Lean meat portion shall not be less than 25% of the total formulation.

(b) These products shall have a maximum fat content of 30% for pork, 25% for rest of the food animals and 15% for birds and rabbits.

(c) Extenders or binders are allowed up to a level of 3.5% in the finished products. Meat products containing more than 3.5% binders or extenders or more than 2.0% isolated soy proteins must be labelled as “Imitation”.

(d) Moisture content of the finished products shall not exceed four times the protein content plus 10 percent (4P + 10), i.e., 10 percent added water.

(e) Low fat products shall not contain more than 10% fat, while extra lean products shall be less than 5% fat.

(9) The product may contain Food Additives as per Appendix A.

(10) The product shall conform to the microbiological requirement given in Appendix B.

(11) The product can be in chilled or frozen form. In chilled form product shall be stored and transported at or below 4 ^{0}C and in frozen form it shall be stored and transported at or below minus 18 ^{0}C.

3. Cured or Pickled and Cooked or Smoked Meat Products, or both.-

(1) The standards specified in this clause shall apply to cured or pickled and cooked or smoked meat products, or both which have been packed in any suitable packing material. This category describes several processing steps (e.g., curing or pickling, salting, cooking, smoking) that preserve and extend the shelf life of the meat and poultry products.

(2) Cured meat means the product prepared after curing meat with common salt, nitrate or nitrite and adjuncts for the purpose of preservation and obtaining desirable colour, flavour and shelf life.

(3) Meat pickle is traditional, shelf-stable ready-to-eat products which are prepared using common salt, vinegar and edible vegetable oil, seasoned with spices and condiments.

(4) Smoked meat means the product prepared by exposing the cured or cooked meat to smoke produced by hard wood for flavor and preservation. Alternatively, liquid smoke (oil-based, water soluble or dry powder) shall be applied to meat through dipping or drenching, automising (spraying) or directly mixing with meat formulation.

(5) In curing, smaller meat pieces or bigger cuts either deboned or bone-in shall be dipped in or injected with curing solution. There are two types of curing methods; wet and dry. In wet curing, the meat cuts are either dipped in curing solution or injected with curing solution using multi-needle injector or hand stitching or arterial injection followed by dipping or tumbling. In dry curing, all the curing ingredients are rubbed over the meat surface and stored for a long time under temperature and humidity control.

(6) Cured meat may be steamed or pressure cooked or smoked. Alternatively cured meat may be subjected to maturation and drying or smoking. Smoking is done through the addition of either traditional vapors or liquid smoke to meat. There are two types of smoking; natural wood smoke and liquid smoke. Natural wood smoke is generally produced from non-resinous hardwood sawdust, woodchips, or logs. The smoke may be produced from an electronically controlled smoke generator or from a variety of much simpler versions, ranging from log burning to human power controlled smoke generators.

(7) For the purpose of pickling, boneless or bone-in meat cubes or chunks shall be subjected to cooking, followed by light frying, added with vinegar, seasoned with pre-processed spice mix, condiments and covered with heated and cooled oil.

(8) It shall contain meat, curing ingredients consisting of food-grade salt (NaCl or Potassium chloride), Nitrites and phosphates and for pickled meat product it shall contain vinegar also.

(9) These products may also contain those ingredients which are either standardised or permitted for use in the preparation of other standardized food under these regulations and includes but not limited to the following ingredients, namely:-

(a) Carbohydrate and protein binders such as,-

(i) milk powders, caseinate, whey powder;

(ii) hydrolysed vegetable protein, soya or caseinate;

(iii) Sugar, sucrose (Sugar and Brown cane sugar), dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup), honey, treacle or molasses;

(b) Herbs, Spices, seasonings and condiments, Saffron, Vinegars, Mustards, sauces and like products; Yeast and like products, Soybean based seasonings, Juniper berries and Smoke or smoke essences.

(10) The product may contain Food Additives as per Appendix A.

(11) The product shall conform to the microbiological requirement given in Appendix B.

(12) The product can be in chilled or frozen form. In chilled form product shall be stored and transported at or below 4 ^{0}C and in frozen form it shall be stored and transported at or below minus 18 ^{0}C (except pickled meat products).

4. Dried or Dehydrated Meat Products.-

(1) The standards specified in this clause shall apply to dried or dehydrated meat products which have been packed in any suitable packing material. This category describes several treatment methods (e.g., curing, salting, pickling and drying) that preserve and extend the shelf life of the meat and meat products.

(2) Dried or dehydrated meat products means the meat or meat products in which part of free water has been removed by evaporation or sublimation. Meat products preserved by dehydration are conveniently divided into two groups based on water activity (a_w) levels; "low-moisture" and "intermediate-moisture" meat products. It may be of following types, namely:-

(a) Low-moisture meat products: Meat products having an a_w of less than 0.60 and containing less than 25% moisture.

(b) Intermediate-moisture foods: Meat products having an a_w between 0.60 and 0.85 and containing less than 50% moisture.

(3) Dehydration method of preserving meat lowers the moisture content of the product to a point at which the activity of food-spoilage and food poisoning microorganisms is inhibited. Moisture removal may be accomplished by low-temperature drying (<48.88 ~ 49.0 °C) or high temperature drying (>93.33 °C). Drying of meat shall be done through salting or solar or mechanical or vacuum or freeze drying to achieve the desired moisture and water activity level.

(4) These products may also contain those ingredients which are either standardised or permitted for use in the preparation of other standardised food under these regulations and includes but not limited to the following ingredients, namely:-

(a) Food-grade salt (NaCl or Potassium chloride), Nitrites and phosphates;

(b) Trimmings, fat, skin, edible by-products, mechanically deboned meat (MDM) or mechanically recovered meat (MRM);

(c) Carbohydrate and protein binders such as,-

(i) milk powders, caseinate, whey powder, egg protein, vegetable protein products;
(ii) hydrolysed vegetable protein, soya or caseinate;
(iii) meal, flour, fibres or starch prepared from cereal, grain, potato or sweet potato;
(iv) rusk, bread, biscuit or bakery products;
(v) sucrose (sugar and brown cane sugar), dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup), honey, treacle or molasses;
(vi) Other Dairy products and analogues;

(d) Black Salt Herbs, sugars, spices, Masalas, seasonings and condiments, Saffron, preservatives, stabilizers, Vinegars, Mustards, sauces and like products; Yeast and like products, Soybean based seasonings and condiments, Juniper berries;

(e) Fats, oils and fat emulsions;

(f) Fruits, vegetables, fruit and vegetable juices, fruit and vegetable nectars and protein products derived from vegetable sources such as soya beans;(g) Cereal and cereal products;

(h) Egg and egg product;

(i) Sweetening agents including honey (Excluding artificial Sweeteners);

(j) Water soluble hydrolysed protein;

(k) Carrageenan, Gellan gum, Guar gum, Gum Arabic (Acacia gum), Karaya Gum, Konjac Flour, Cellulose gel, Processed Eucheuma Seaweed, Sodium Carboxymethyl Cellulose, Xanthan gum;

(l) Smoke or smoke essences;

(5) The product may contain Food Additives as per Appendix A.

(6) The product shall conform to the microbiological requirement given in Appendix B.

(7) The product can be in chilled or frozen form. In chilled form product shall be stored and transported at or below 4 ^{0}C and in frozen form it shall be stored and transported at or below minus 180C (except low-moisture meat products).

5. Cooked or Semi-Cooked Meat Products. -

(1) The standards specified in this clause shall apply to cooked or Semi-cooked meat products which includes cooked (including cured and cooked) and heat treated meat products.

(2) Cooked meat means the meat or meat product subjected to heat treatment, wherein minimum thermal core temperature of 75 °C is achieved.

(3) Semi cooked meat means partially heat treated meat or meat product that will require additional cooking before consumption.

(4) Process of preparation of cooked or semi cooked meat products involves marination or mixing of meat (bone-in or boneless) or meat mince with different ingredients like brine, spices, binders, fat, additives etc., may be additionally coated, and heated to particular temperature time combination. Cooking improves sensory qualities and extends shelf life by destruction of spoilage organisms and enzymes. Cooking can be achieved by dry heating (roasting, broiling, frying), moist heating (braising, broiling or water cooking, oven heating, steam cooking) or using electromagnetic energy (microwave cooking). Core temperature and end point temperature are the important indicators of doneness which needs to be standardised for different types of products. After cooking, these products can also be smoked.

(5) These products may contain only those ingredients which are either standardised or permitted for use in the preparation of other standardised food under these regulations and includes but not limited to the following ingredients, namely:-

(a) Common Salt (Sodium chloride or potassium chloride), or salt substitutes (including nitrites).

(b) Carbohydrate and protein binders such as,-

(i) milk powders, , caseinate, whey powder, egg protein, vegetable protein products;

(ii) meal, flour, fibres or starch prepared from grain, or potato or sweet potato;

(iii) bread, biscuit or bakery products;

(c) Sucrose (sugar and brown cane sugar), dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup);

(d) Fats;

(e) Vegetables;

(f) Cereal and cereal products;

(g) Herbs, Spices, seasonings and condiments;

(h) Water soluble hydrolyzed protein.

(6) The product may contain Food Additives as per Appendix A.

(7) The product shall conform to the microbiological requirement given in Appendix B.

(8) The product can be in chilled or frozen form. In chilled form product shall be stored and transported at or below 4 ^{0}C and in frozen form it shall be stored and transported at or below minus 18 ^{0}C.

6. Fresh or Chilled or Frozen Rabbit meat.-

(1) The standards specified in this clause shall apply to fresh or chilled or frozen rabbit meat which includes raw rabbit whole carcasses, pieces, cuts or edible offals that have been packed in any suitable packaging material.

(2) Rabbit meat means the edible portion of domestic rabbits (*Oryctolagus cuniculus*).

(3) Fresh rabbit meat means rabbit meat that has not been treated in any way to ensure its preservation.

(4) Chilled rabbit meat means fresh rabbit meat subjected to chilling in such a way that the product is maintained at temperature of 0 - 7 °C.

(5) Frozen rabbit meat means chilled rabbit meat subjected to freezing in such a way that the product is maintained at temperature of -18° C or below.

(6) Rabbit meat edible offal means edible by-products derived from slaughtered rabbit which includes brain, liver, gut, paunches and lungs.

(7) Rabbit meat may be categorised in to following five types, namely: -

(a) Fresh or Chilled or Frozen carcasses;

(b) Fresh or Chilled or Frozen cuts, which may be of the following sub-types, namely: -

(i) Fore legs;
(ii) Ribs;
(iii) Loin;
(iv) Hind legs;

(c) Fresh or Chilled or Frozen Edible Offals

(8) Final product shall have moisture content between 72.5 % to 75.0 %, protein content between 20.0 % to 23.0 % and fat content between 1.0 % to 6.0 %.

(9) Rabbit meat shall be stored at 4±1º C for short term storage and -18±1º C for long term storage. The chilled material shall be consumed within 2 to 4 days under normal refrigeration conditions of storage. Frozen meat shall be consumed within 10 months.

(10) The product shall conform to the microbiological requirement given in Appendix B.]

[57]**[7. FRESH OR CHILLED OR FROZEN PORK OR PIG MEAT:**

(1) The standards specified in this clause shall apply to fresh or chilled or frozen pork including raw pork, whole carcasses, pieces, cuts or edible offal that have been packed in any suitable packaging material.

(2) For the purposes of this clause,-

(a) "pork" means the edible portion of domestic pigs;

(b) "fresh pork" means pork that has not been treated in any manner to ensure its preservation;

(c) "chilled pork" means fresh pork subjected to chilling in such a manner that the product is maintained at a temperature between 0°C to 4 °C;

(d) "frozen pork" means chilled pork subjected to freezing in appropriate equipment in such a manner that the product is maintained at a temperature of -18° C or lower;

(e) "pork edible offal" means edible by-products derived from slaughtered pig which includes brain, liver, gut, paunches, tripe, lungs, and other edible parts;

(3) The pork may be categorised into the following three types, namely:-

(a) fresh or chilled or frozen carcasses or carcass halves or carcass quarters;

(b) fresh or chilled or frozen cuts; bone-in or bone-less, true to its type;

(c) fresh or chilled or frozen edible offals.

(4) Boneless meat shall have moisture content between 70 % to 72%, protein content between 20 % to 22 % and fat content between 5 % to 6 %.

(5) Pork must be stored at 4 ºC for short term storage and at -18 ºC or below for long term storage.

(6) The chilled pork shall be consumed within two to four days under normal chilling conditions of storage and frozen pork shall be consumed within ten months.

8. FRESH OR CHILLED OR FROZEN BEEF:

(1) The standards specified in this clause shall apply to fresh or chilled or frozen beef including raw beef whole carcasses, pieces, cuts or edible offal that have been packed in any suitable packaging material.

(2) For the purposes of this clause,-

(a) "beef" means the edible portion of bovine animals including buffaloes;

(b) "fresh beef" means bovine meat that has not been treated in any way to ensure its preservation;

(c) “chilled beef” means fresh bovine meat subjected to chilling in such a way that the product attains a temperature of 0°C to 4°C;

(d) “frozen beef” means chilled bovine meat subjected to freezing in an appropriate equipment in such a way that the product attains a temperature of -18° C or lower;

(e) “beef edible offal” means edible by-products derived from slaughtered bovine animals which include brain, liver, gut, paunches, tripe, lungs.

(3) Beef shall be of following three types, namely:-

(a) fresh or chilled or frozen carcasses or carcass halves or carcass quarters;

(b) fresh or chilled or frozen cuts ; bone-in or bone-less, true to its type;

(c) fresh or chilled or frozen edible offals.

(4) Boneless meat shall have moisture content between 68 % to 77 %, protein content between17.5% to 23.5 % and fat content between 8 to 12 %. For buffalo meat, the fat content shall be ranging from 1% to 3 %.

(5) Beef shall be stored at 4 ºC for short term storage and at -18 ºC or below for long term storage.

(6) The chilled beef shall be consumed within two to four days under normal chilling conditions of storage and frozen beef shall be consumed within twelve months.

9. FRESH OR CHILLED OR FROZEN CHEVON OR GOAT MEAT:

(1) The standard specified in this clause shall apply to fresh or chilled or frozen chevon including goat whole carcasses, pieces, cuts or edible offal that have been packed in any suitable packaging material.

(2) For the purposes of this clause,-

(a) “chevon” means the edible portion of domestic goats;

(b) “fresh chevon” means goat meat that has not been treated in any way to ensure its preservation;

(c) “chilled chevon” means fresh goat meat subjected to chilling in such a way that the product attains a temperature of 0°C to 4 °C;

(d) “frozen chevon” means chilled goat meat subjected to freezing in an appropriate equipment in such a way that the product attains a temperature of -18° C or lower;

(e) “chevon edible offal” means edible by products derived from slaughtered goat which includes brain, liver, gut, paunches, tripe, lungs and other edible parts.

(3) Chevon shall be of following three types, namely:-

(a) fresh or chilled or frozen carcasses or carcass halves or carcass quarters;

(b) fresh or chilled or frozen cuts ; bone-in or bone-less, true to its type;

(c) fresh or chilled or frozen edible offals.

(4) Boneless meat shall have moisture content between 74 %to 76 %, protein content between 20 % to 22 % and fat content between 2% to 4 %.

(5) Chevon shall be stored at 4 ºC for short term storage and at -18 ºC or below for long term storage.
(6) The chilled chevon should be consumed within two to four days under normal chilling conditions of storage and frozen chevon shall be consumed within twelve months.

10. FRESH OR CHILLED OR FROZEN MUTTON OR SHEEP MEAT:

(1) The standards specified in this clause shall apply to fresh or chilled or frozen mutton including sheep whole carcasses, pieces, cuts or edible offal that have been packed in any suitable packaging material.

(2) For the purpose of this clause,-

(a) "mutton" means the edible portion of domestic sheep;

(b) "fresh mutton" means sheep meat that has not been treated in any way to ensure its preservation;

(c) "chilled mutton" means fresh sheep meat subjected to chilling in such a way that the product attains a temperature of 0°C to 4 °C;

(d) "frozen mutton" means chilled sheep meat subjected to freezing in an appropriate equipment in such a way that the product attains a temperature of -18° C or lower;

(e) "mutton edible offal" means edible by products derived from slaughtered sheep which includes brain, liver, gut, paunches, tripe, lungs and other edible parts.

(3) Mutton shall be of following three types:

(a) fresh or chilled or frozen carcasses or carcass halves or carcass quarters;

(b) fresh or chilled or frozen cuts ; bone-in or bone-less, true to its type;

(c) fresh or chilled or frozen edible offals.

(4) Boneless meat shall have moisture content between 68% to 72 %, protein content between 20 % to 22 % and fat content between 4% to 10 %.

(5) Mutton shall be stored at 4ºC for short term storage and at -18ºC or below for long term storage.

(6)The chilled mutton shall be consumed within two to four days under normal chilling conditions of storage and frozen mutton shall be consumed within twelve months.

11. FRESH OR CHILLED OR FROZEN POULTRY MEAT:

(1) The standards specified in this clause shall apply to Fresh or Chilled or Frozen Poultry Meat including poultry whole carcasses, pieces, cuts or edible offal that have been packed in any suitable packaging material.

(2) For the purpose of this clause,-

(a) "poultry meat" means the edible portion of poultry birds (chicken, duck, turkey, geese, guinea fowl, Japanese quail);

(b) "fresh poultry meat" means poultry meat that has not been treated in any way to ensure its preservation;

(c) "chilled poultry meat" means fresh poultry meat subjected to chilling in such a way that the product attains a temperature of 0°C to 4 °C;

(d) "frozen poultry meat" means chilled poultry meat subjected to freezing in appropriate equipment in such a way that the product attains a temperature of -18° C or lower;

(e) "poultry edible offal" means edible by products derived from slaughtered poultry birds which includes gizzard, liver and heart.

(3) Dressed chicken shall be of the following three types, namely: -

(a) fresh or chilled or frozen carcasses

(b) fresh or chilled or frozen cuts, ; bone-in or bone-less, true to its type**;**

(c) fresh or chilled or frozen edible offals.

(4) Boneless meat shall have moisture content between 60% to 74.86 %, protein content between 19.50% to 23.20 % and fat content between 3.50% to 18 %.

(5) Poultry meat shall be stored at 4º C for short term storage and at -18º C or below for long term storage.

(6) The chilled poultry meat shall be consumed within two to four days under normal chilling conditions of storage and frozen poultry meat shall be consumed within twelve months.

Note: All the products listed in regulation 2.5.2 under clause 7, 8, 9, 10, 11, 12 shall comply with following requirements:

Amendment for substitution of highlighted provision

[77][All the products listed in regulation 2.5.2 shall comply with following requirements:]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

(a) Notifications or advisories issued under the Drugs and Cosmetics Rules, 1945 as well as by the Department of Animal Husbandry, Dairying and Fisheries concerning use in or consumption of veterinary drugs (antibiotics and growth promoters) by food producing animals or poultry birds must be complied with by the producers or marketers of meat and poultry products.
(b) Use of genetically modified techniques are prohibited for production of meat of animals or poultry birds.
(c) Meat producing animals except poultry shall not be fed with feed containing meat or bone meal including internal organs, blood meal and tissues of bovine or porcine origin materials except milk and milk products.

Amendment for substitution of highlighted provision

[77][(c) Milk and meat producing animals except poultry, pig and fish shall not be fed with feed containing meat or bone meal including internal organs, blood meal and tissues of bovine or porcine origin materials except milk and milk products. Commercial feeds shall comply with the relevant BIS standards, as may be specified by the Food Authority from time to time, and carry BIS certification mark on the label of the product.]
[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

(d) Production or slaughtering or processing of animals for production of meat of porcine origin in the same production facilities where animals of bovine or ovine or caprine origin are produced or slaughtered or processed is prohibited.
(e) Where eligible meat products are intended to be imported, there should be appropriate inspection and certification procedures in place to ensure all the above compliances before grant of market access.]

[65][12. MARINATED MEAT PRODUCTS.-

(1) The standards specified in this clause shall apply to marinated meat products which have been packed in any suitable packing material. This category describes several processing steps (e.g., curing or salting, injection, massaging or tumbling, coating fixation by frying or heating, cooking, smoking) that preserve and extend the shelf life of the meat and poultry products in addition to improving the colour, tenderness, yield and functionality of the product.

(2) Marinade means a mixture of non-meat ingredients such as salt, phosphates, acids, tenderisers, sugar, seasoning and flavouring agents, in the form of liquid solution or powder that is applied to uncooked meat for marination.

(3) Marinated Meat means the meat mixed with the marinade for suitable time period base on the method of marination in order to improve colour, flavor, yield, tenderness and other functional properties of meat.

(4) Marination means the process of applying an aqueous solution or powder composed of ingredients such as salt, phosphates, acids, tenderisers, sugar, seasoning and flavourings to meat products.

(5) Marination shall be done by applying marinade, aqueous solution or powder to bone-in cuts or boneless meat by soaking, blending, tumbling or massaging or mechanical injection for suitable time period base on the method of marination.

(6) These products may also contain those ingredients which are either standardised or permitted for use in the preparation of other standardised food under these regulations and includes but not limited to the following ingredients, namely:-

(a) Potassium chloride, Phosphates, Nitrites;
(b) Organic acids (acetic, lactic and citric acid), Wine, beer, fruits or fruit juice, curd, buttermilk, salsa and soy sauce;
(c) Binders: hydrocolloids, gelatin, soy and milk proteins and modified food starches;
(d) Sugar, sucrose (Sugar & Brown cane sugar), dextrose (glucose), lactose, maltose, syrup (including corn syrup), honey, treacle or molasses;
(e) Herbs, Spices, seasonings and condiments;
(f) Ascorbates, Monosodium glutamate;
(g) Xanthan gum and Guar gum.

(7) The product may contain Food Additives as per Appendix A.

(8) The product shall conform to the microbiological requirement given in Appendix B.

(9) The product can be in chilled or frozen form. In chilled form product shall be stored and transported at or below 4°C and in frozen form it shall be stored and transported at or below minus 18°C.

13. FERMENTED MEAT PRODUCTS

(1) The standards specified in this clause shall apply to fermented meat products which have been packed in any suitable packing material. Fermentation is a preservation method caused by microorganisms which lowers pH and water activity resulting in unique and distinctive properties.

(2) Fermented meat product means the meat product produced by action of selected fermenting microorganisms such as lactic acid bacteria or yeast, or both, in the presence of salt by the process of fermentation, ripening and drying. It may contain non-meat ingredients such as sugar, spices, seasonings and condiments.

(3) Starter culture means the culture of microorganisms which are used for initiating fermentation in meat product.

(4) Fermented meat products are produced by application of pretested microbial starter culture, with or without use of optional ingredients. Meat can also be fermented using back slopping without using

starter cultures. Mixed meat is allowed to ripen or ferment in ripening chamber. Fermentation reduces pH to a level of 4.5 to 5.5 due to acidulation produced by microbial activity and reduces water activity due to presence of salt and drying.

(5) These products may also contain those ingredients which are either standardised or permitted for use in the preparation of other standardised food under these regulations and includes but not limited to the following ingredients, namely:-

(a) Curing ingredients consisting of Sodium chloride, Nitrites and Phosphates;
(b) Carbohydrate and protein binders such as,-
(i) milk powders, caseinate, whey powder, egg protein, vegetable protein products;
(ii) meal, flour, fibres or starch prepared from grain, or potato or sweet potato;
(iii) bread, biscuit or bakery products;
(iv) cereal products;
(c) Herbs, spices, seasonings and condiments; vinegar;
(d) Water soluble hydrolysed protein.

(6) The product may contain Food Additives as per Appendix A.

(7) The product shall conform to the microbiological requirement given in Appendix B.

(8) The product can be in chilled or frozen form. In chilled form product shall be stored and transported at or below 4 °C and in frozen form it shall be stored and transported at or below minus 18 °C.]

[72][14. ANIMAL CASINGS

(1) The standard specified in this clause shall apply to "Animal casings" which are soft cylindrical containers used for preparation of certain meat products such as sausages.

(2)Animal casings are soft cylindrical containers obtained from large and small intestines, oesophagus and urinary bladder of slaughtered food animals.

(3) The casings shall be dried or wet salted and are calibrated by measuring the diameter in case of wet salted casings and measuring half circumference in case of dried casings.

(4) The product shall be free from holes, blisters, lacerations, nodules, cicatrices, domestics, black nodes, slime, mucus, dung, salt burns, rust, moulds or fungus infestation, signs of putrefaction, rancidity or sour (acidic) smell and parasitic infestation.

(5) for the purpose of this clause,-

(a) Cicatrix — Scar of healed-up wound;
(b) Domestic — Small grease spot in the casing;
(c) Kink — Twisted loop in the casing;
(d) Nodule — Small rounded structure;
(e) Black Node — Black node usually caused by the residue of the ingesta or slime left behind in the casing;
(f) Rust — Black spots caused by putrefaction due to bacterial or fungal action;

(g) Salt Burn — Areas of discolouration generally caused by: (a) the entry of air-into tin containers in which the casings are packed, and/or (b) by the use of poor quality salt.

(6) Large and small intestines, oesophagus and urinary bladder shall be separated from adhering tissues and the contents should be stripped off by uniform gentle pressing either mechanically or manually. This step is followed by washing, salting and/or drying and sorting.

(7) The products may contain Food Additives permitted in Appendix A.

(8) The products shall conform to the microbiological requirement given in Appendix B.]

[57][2.5.3 Egg and Egg Products:

1. Fresh Eggs:

(1) Fresh eggs means eggs which have not been washed or dry-cleaned and which are collected at least once weekly and shall be packed and graded not later than the first working day after arrival at the packing station.

(2) The standard specified in this clause shall be applicable to eggs in shell other than broken, incubated or cooked eggs, laid by poultry species or birds meant for direct human consumption or for the preparation of egg products

(3) Eggs shall have clean and sound shell and free from cracks, leaks and fecal contamination.

(4) Minimum requirements of major chemical constituents in the whole egg contents of various poultry species:

Chemical Constituents	Chicken	Turkey	Guinea Fowl	Quail	Duck	Goose
Water (%)	72.8 -75.6	71.6-75.7	71.3-74.1	73.1-76.4	68.2-71.4	68.9-72.3
Proteins (%)	12.8 - 13.4	12.6-13.6	12.8-14.2	12.5-13.4	13.1-14.2	13.4-14.3
Fats (%)	10.5 - 11.8	10.8-12.6	11.2-12.8	10.6-11.7	13.8-15.0	12.4-13.6
Carbohydrates (%)	0.3 – 1.0	0.6-0.8	0.7-0.9	0.8-1.0	1.1-1.3	1.1-1.3
Ash (%)	0.8 – 1.0	0.7-0.9	0.7-0.1	1.0-1.2	0.9-1.0	1.0-1.4.]

[72][2. Frozen Egg Products.- (1) The standard specified in this clause shall apply to frozen egg products designated as "Frozen egg white or albumen", "frozen egg yolk" and "frozen whole egg" prepared from hens' (*Gallus gallus)* eggs packaged in any suitable packaging material.

(2) for the purpose of this clause,-

(a) Frozen egg productmeans the whole egg, egg yolk, or white whichis pasteurized and frozen;

(b) Whole eggmeans the homogeneous product obtained from the complete contents of broken out hens eggs-in-shell;

(c) Egg yolk meansthe homogeneous product produced from the separation of the yolk of broken out hens -eggs-in-shell;

(d) Egg albumenmeansthe homogeneous product obtained from the separation of the white of broken out hens eggs-in-shell.

(3) Shell eggs are washed, rinsed, sanitized, and candled, then broken, monitored for quality and imperfections, and frozen egg products are prepared by freezing either albumen, yolk or whole egg.

(4) Albumen and yolk alone and whole egg shall be processed strained, homogenized, desugarized, pasteurized (61 to 63 degree C for 5 minutes), frozen and maintained in the frozen condition (-23.3° to -40°C).

(5) Minimum requirements of major chemical constituents of the frozen egg products:-

Table

Composition	Frozen egg white	Frozen egg yolk	Frozen whole egg
Min solids matter content (%)	10.5	40.0	22.0
Min fat content (%)	0.05	25.0	9.8
Min protein content (%)	10.0	15.0	10.5
Extraneous matter	No particles over 1 mm in 100 g and should not exceed 100 mg/kg	No particles over 1 mm in 100 g and should not exceed 100 mg/kg	No particles over 1 mm in 100 g and should not exceed 100 mg/kg
Min. concentration of hydrogen ions (pH)	8.5	5.9	7.0
Max. beta-hydroxybutyric acid (mg/kg)	10	10	10
Max lactic acid (mg/kg)	1,000	1,000	1,000
Max succinic acid (mg/kg)	25	25	25

(6)The products may contain Food Additives permitted in Appendix A.

(7)The products shall conform to the microbiological requirement given in Appendix B.

3. Egg powder

(1) The standard specified in this clause apply to 'Egg powder' obtained under hygienic conditions from the liquid contents of sound, wholesome, hens' (*Gallus gallus)* eggs by suitable drying. The product so obtained shall retain the original properties of fresh eggs, like solubility of protein, aerating capacity, binding power and palatability.

(2) For the purpose of this clause,-

(a) Whole Egg powder: Product prepared from suitable drying of whole egg liquid with maximum permissible moisture content of 2.0 % and free from any extraneous material and off odour;

(b) Egg Yolk Powder: Product prepared from suitable drying of egg yolk with maximum permissible moisture content of 2.0 % and free from any extraneous material and off odour;

(c)Egg White Powder: Product prepared from suitable drying of egg white with maximum permissible moisture content of 2.0 % and free from any extraneous material and off odour.

(3) The eggs, before breaking, shall be properly washed, dried and cooled followed by breaking, inspection and collection in sterilized containers. Then liquid egg shall be homogenized, filtered, pasteurized, desugarized and re-pasteurized.

(4) Minimum requirements of major chemical constituents in the egg powder:-

Table

Composition	Dried egg white	Dried egg yolk	Dried whole egg
Min total solids (%)	91.5	95.0	95.0
Min Total lipid content (%)	-	61.6	41.2
Min protein content (%)	-	33.1	45
Min. concentration of hydrogen ions (pH)	-	3.9	4.2

(5)The products may contain Food Additives permitted in Appendix A.

(6) The products shall conform to the microbiological requirement given in Appendix B.

4. Liquid Egg Products

(1) The standard specified in this clause shall apply to egg products designated as "Liquid Egg White", "Liquid Egg Yolk" and "Liquid Whole Egg" prepared from hens' (*Gallus gallus)* eggs packaged in any suitable packaging material.

(2) For the purpose of this clause,-

(a)Liquid egg productmeansthe whole egg, egg yolk /or egg white, which is pasteurized and preserved using approved preservatives e.g beta-Hydroxy Butyric acid, Lactic acid or Succinic acid.

(b)Liquid whole egg means the homogeneous product obtained from the complete contents of broken out hens eggs.

(c) Liquid Egg yolk means the homogeneous product produced from the separation of the yolk of broken out hens-eggs.

(d) Liquid Egg albumen means the homogeneous product obtained from the separation of the white of broken out hens egg.

(3) Shell eggs shall be washed, sanitized, and candled, then broken, monitored for quality and imperfections, and yolks separated from whites. Egg whites shall then be clarified, filtered, pasteurized and or addition of chemical preservatives followed by filling into containers and maintained in the liquid condition at 4°C or below for up to 7 days.

(4) Whipping agents such as triethyl citrate, Sodium Citrate, Sodium Hexametaphosphate, Tetrasodium Pyrophosphate may also be added.

(5) The products shall conform to the following compositional requirements, namely:-

Table

Composition	Liquid egg white	Liquid egg yolk	Liquid whole egg
Min solids matter content (%)	10.5	40.0	22.0
Min fat content (%)	0.05	25.0	9.8
Min protein content (%)	10.0	15.0	10.5
Extraneous matter	No particles over 1 mm in 100 g and should not exceed 100 mg/kg	No particles over 1 mm in 100 g and should not exceed 100 mg/kg	No particles over 1 mm in 100 g and should not exceed 100 mg/kg
Min. concentration of hydrogen ions (pH)	8.5	5.9	7.0

Max. beta-hydroxybutyric acid (mg/kg)	10	10	10
Max lactic acid (mg/kg)	1,000	1,000	1,000
Max succinic acid (mg/kg)	25	25	25

(6) The products may contain Food Additives permitted in Appendix A.

(7) The products shall conform to the microbiological requirement given in Appendix B.

5. Pickled Eggs

(1) The standard specified in this clause shall apply to "Pickled eggs" which have been packed in any suitable packing material. This category describes several treatment methods (e.g., hard boiling, pickling, maturation etc) that preserve and extend the shelf life of the hens' (*Gallus gallus)* or quail (*Coturnixcoturnixjapanica*) eggs.

(2) For the purpose of this clause,-

(a) Pickle solution - A combination of salt, water, oil, acids and seasonings.

(b) Pickled Eggs-It is the product prepared under hygienic conditions from hard-boiled, sound and wholesome eggs using pickle solution.

(3) Egg Pickle is prepared by hard boiled and peeled eggs by immersing in pickling solution to achieve a pH of 3.2 to 3.6 and packed in suitable container which can be stored at ambient temperature. The egg pickles shall possess a good uniform color and appearance. It shall possess a good texture and normal characteristic taste and flavor typical of the type. The product shall not be unduly hard or rubbery and shall be devoid of any objectionable taste, smell or odor.

(4) Essential composition:-

(a) Hard boiled and peeled eggs.

(b) Common Salt

(c) Vinegar

(d) Edible Oil

(e) Spices and condiments

(5) The products shall conform to the following compositional requirements, namely:-

Table

S. No.	Characteristics	Requirements

1	Acidity as percent acetic acid *Min*	0.6 to 0·8
2	Sodium chloride percent by mass *Max*	3·0
3	*pH* of the pickling solution	3.2 to 3.6

(6) The products may contain Food Additives permitted in Appendix A.

(7) The products shall conform to the microbiological requirement given in Appendix B.]

2.6. Fish and Fish Products:

2.6.1 Fish and Fish Products

[36][**1. Frozen shrimp**:

(a) Frozen shrimp which includes shrimps, means the product frozen raw or partially or fully cooked, peeled or unpeeled.

(b) Frozen shrimp is the product obtained from species belonging to Penaeidae, Solenoceridae, Aristeidae, Sergestidae, Hippolytidae, Crangonidae, Palaemonidae and Atyidae. The product after preparation, shall be subject to a freezing process and shall comply with the conditions laid down hereafter; -

(i) the freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The freezing process shall not be regarded as complete unless and until the product temperatures has reached -18^0C or lower at the thermal centre after thermal stabilisation;

(ii) the water used for cooking shall be of potable quality or clean seawater, which meets the same microbiological standards as potable water and is free from potential contaminants;

(iii) the product shall be kept deep frozen to maintain the quality during transportation, storage and distribution;

(iv) frozen shrimps shall be processed and packaged to minimise dehydration and oxidation;

(v) the practice of repacking frozen products under controlled conditions which shall maintain the quality of the product, followed by the reapplication of the freezing process as defined, is permitted.

(c) Requirements. -

(i) frozen shrimp shall be prepared from sound shrimps or prawns which are of a good quality to be sold fresh for human consumption;

(ii) if glazed, the water used for glazing or preparing glazing solutions shall be of potable quality (IS 10500) or shall be clean sea-water, which meets the same microbiological standards as potable water and is free from potential contaminants;

(iii) other ingredients shall be of food grade quality and conform to all applicable standards prescribed in these regulations.

(d) Food Additives.-

Only those food additives specified under these regulations shall be used.

(e) Hygiene.-

The product shall be prepared and handled in accordance with the guideline specified in Part-II of Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(f) Contaminants, Toxins and Residues.-

The products covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and conform to the microbiological requirements specified in Appendix B of these regulations.

(g) Packaging and Labelling.-

The products shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Packaging and Labelling), Regulations, 2011 and shall also apply to the pre-packaged products. The product shall be stored at -18°C or lower and shall be displayed on the label.]

2. **Frozen Lobsters** means the product prepared from fresh lobsters of sound quality belonging to the genus Homarus of the family Nephropidae and from the families Palinuridae and Scyllaride. The Norway Lobster may be prepared from Nephros norvegicus. The product shall not be a mixture of different species. The product may be raw or cooked. The product may be glazed with water. The product shall conform to the following requirements:—

S.No.	*Characteristics*	*Requirements in Raw Product*	*Requirement in Cooked Product*
(1)	Total Volatile Base (Nitrogen)	Not more than 30 mg/100 gm	Absent in 25gm

3. **Frozen squid and parts of squid** means the product prepared from fresh squid of sound quality belonging to squid species of Loliginidae, Ommastrephidae Onychoteuthide and Thysanotenthidae families. The product may be glazed with water. No food additive is allowed in this product. The product shall conform to the following requirements:

Sl. No.	*Characteristics*	*Requirements*
(1)	Total Volatile Base (Nitrogen)	Not more than 30 mg/100 gm

[36][**4**. **Frozen Finfish**:

(a) Frozen finfish means the product frozen from the species as defined below and offered for direct consumption and for further processing.

(b) Frozen finfish refers to finfish species suitable for human consumption, with or without the head, from which the viscera or other organs may have been completely or partially removed. The product after preparation shall be subject to a freezing process and shall comply with the conditions laid down hereafter;-

(i) the freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C or lower at the thermal centre after thermal stabilization;

(ii) the product shall be kept deep frozen to maintain the quality during transportation, storage and distribution;

(iii) the product shall be processed and packaged to minimise dehydration and oxidation.

(iv) the practice of repacking frozen products under controlled conditions which shall maintain the quality of the product, followed by the reapplication of the freezing process as defined, is permitted.

(c) Requirements.-

(i) frozen finfish shall be prepared from sound fish which are of a good quality to be sold fresh for human consumption;

(ii) if glazed, the water used for glazing or preparing glazing solutions shall be of potable quality (IS 10500: 2012) or shall be clean sea-water, which meets the same microbiological standards as potable water and is free from potential contaminants;

(iii) other ingredients shall be of food grade quality and conform to all applicable standards prescribed in these regulations;

(iv) the raw material shall not contain more than 100 mg/Kg of histamine. This shall only apply to species of Carangidae, Chanidae, Clupeidae, Coryphaenidae, Engraulidae, Istiophoridae, Mugilidae, Pristigasteridae, Scombridae and Xiphiidae.

(d) Food Additives.-

Only those food additives specified under these regulations shall be used.

(e) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in Part-II of Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(f) Contaminants, Toxins and Residues.-

The products covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and conform to the microbiological requirements specified in Appendix B of these regulations.

(g) Packaging and Labelling.-

The products shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Packaging and Labelling), Regulations, 2011and shall apply to the pre-packaged products. The product shall be stored at -18°C or lower and shall be displayed on the label.

5. Frozen fish fillets:

(a) Frozen fish fillets means the product frozen from the species of fish as defined below and offered for direct consumption for further processing.

(b) Frozen fillets are slices of fish which are removed from the carcass of the same species of fish suitable for human consumption by cuts made parallel to the backbone and sections of such fillets cut so as to facilitate packing, and further processing. The product after preparation shall be subject to a freezing process and shall comply with the conditions specified below:-

(i) the freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C or lower at the thermal centre after thermal stabilization. The product shall be kept deep frozen so as to maintain the quality during transportation, storage and distribution;

(ii) The product shall be processed and packaged so as to minimize dehydration and oxidation;

(iii) re-packing of the frozen products can be carried out under controlled conditions, which will maintain the quality of the product, followed by the re-application of freezing process as mentioned above;

(iv) fillets may be presented as boneless, provided that boning has been completed including the removal of pin- bones.

(c) Requirements.-

(i) Frozen fish fillets shall be prepared from sound fish which are of a good quality to be sold fresh for human consumption;

(ii) if glazed, the water used for glazing or preparing glazing solutions shall be of potable quality (IS 10500) or clean sea-water, which meets the same microbiological standards as potable water and is free from potential food contaminants;

(iii) other ingredients shall be of food grade quality and conform to all applicable standards prescribed in these regulations;

(iv) The raw material shall not contain more than 100 mg/Kg of histamine. This shall only apply to species of Carangidae, Chanidae, Clupeidae, Coryphaenidae, Engraulidae, Istiophoridae, Mugilidae, Pristigasteridae, Scombridae and Xiphiidae.

(d) Food Additives.-

Only those food additives specified under these regulations shall be used**.**

(e) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in Part-II of Schedule 4 of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(f) Contaminants, Toxins and Residues.-

The products covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and shall conform to the microbiological requirements specified in Appendix B of these regulations.

(g) Packaging and Labelling.-

The products shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Packaging and Labelling), Regulations, 2011and shall also apply to the pre-packaged product. The product shall be stored at -18°C or lower and shall be displayed on the label.]

Note I: Products under article 1, 2, 3, 4 AND 5 shall be frozen in an appropriate equipment quickly to minus (-) 18º C or colder 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 the product temperature has reached minus (-) 18º C or colder at the thermal centre after

thermal stabilization. The product shall be kept deep frozen so as to maintain the quality during transportation, storage and sale. The entire operation including processing and packaging shall ensure minimum dehydration and oxidation. The product may contain food additives permitted in Appendix A except listed product under regulation 2.6.1 (3). The product shall conform to the microbiological requirement given in Appendix B. The products shall be free from any foreign matter and objectionable odour/flavour.

[77]**[6. Dried shark fins** means the product prepared from dorsal and pectoral fins, lower lobe of caudal fin and Pelvic from fresh shark of edible quality. The product shall be free from adhering flesh and may be with or without skin. The product shall be dried in a suitable manner and shall be free from any food additive. The product shall be free from foreign matter, objectionable odour or flavour and rancidity. No food additive is allowed in this product. The products shall conform to the following requirements: —

Sl. No.	*Characteristics*	*Requirements*
(1)	Moisture	Not more than 10.0 percent
(2)	Ash insoluble in HCl on dry basis	Not more than 1.0 percent
(3)	Yeast and Mould Count	Absent in 25gm]

[Amendment for omission of this proviso w.e.f. 1st June, 2022]

[12]**[7. Salted fish/dried salted fish: -** (1) Dried/ salted and dried fishery products means the product prepared from fresh or wholesome fish after drying with or without addition of salt.

(2) The fish shall be bled, gutted, beheaded, split or filleted and washed prior to salting and drying.

(3) Salt used to produce salted fish shall be clean, free from foreign matter, show no visible signs of contamination with dirt, oil, bilge or other extraneous materials.

(4) The product shall be free from foreign matter, objectionable odour and flavour.

(5) The product may contain food additives permitted in Appendix A.

(6) The product shall conform to the microbiological and chemical requirement as laid down in the regulation.

(7) The products shall conform to the following requirements:

Sr. No. **(1)**	**Characteristics** **(2)**	**Requirements** **(3)**
1.	Water activity (a_w), at 25°C	Less than 0.78
2.	Salt Content (percent Sodium Chloride)*	Not less than 12 %

3.	Histamine** content, max.	200 mg/Kg
4.	Acid Insoluble Ash on dry basis	Not more than 1%

*Requirement of salt content is only applicable to dry salted fishery products.

** Requirement of Histamine content is only applicable for dried/dry-salted fishery products prepared from listed fish species associated with histamine poisoning.]

[36]**[8. Canned Fishery Products:**

(a) Canned fishery products means canned finfish, crustaceans and molluscs solid packed or packed in oil, water or other suitable medium.

(b) Description

(i) Product Definition

Canned fishery products are obtained from the following categories of finfish, crustaceans and molluscs:

Finfish	**Crustacean**	**Molluscs**
Sardine and other clupeoids *Sardinella longiceps* *Sardinella gibbosa* *Sardinella fimbriata* *Sardinella albella* *Amblygaster sirm* *Dussumieria acuta* *Dussumieria elopsoides* **Tuna and Bonito** *Thunnus alalunga* *Thunnus albacares* *Thunnus obesus*	**Shrimp/prawn*** Species belonging to the family Penaeidae, Solenoceridae, Aristeidae, Sergestidae, Hippolytidae, Crangonidae, Palaemonidae and Atyidae ***Crab***** *Scylla serrata* *Portunus pelagicus* *Potrunus sanguinolentus*	**Mussels** *Perna viridis* *Perna indica* **Squid** *Loligo duvauceli*

Thunnus maccoyii *Thunnus thynnus* *Thunnus tonggol* *Euthynnus affinis* *Katsuwonus pelamis* *Sarda orientalis* *Sarda sarda* **Mackerel** *Rastrelliger kanagurta* **Seer fish** *Scomberomorus* spp. **Pomfret** *Pampus argenteus* *Pampus chinensis* *Parastromateus niger*		

* For canned shrimp the head, shell and antennae shall be removed

** Canned crab meat is prepared singly or in combination from the leg, claw, body and shoulder meat from which the shell has been removed.

(ii) Process Definition

Canned fishery products are packed in hermetically sealed containers and shall have received a processing treatment sufficient to ensure commercial sterility.

(iii) Presentation

(1)The product shall be presented in one of the following packing media: own juice, brine or water, edible oil, tomato sauce or curry.

(2)The can shall not show any visible external defects like denting, paneling, swelling or rusting.

(3)The contents of the can, on opening shall not display any appreciable disintegration. Pieces from which portions have separated out would be treated as disintegrated units. The

percentage of detached portion of fish calculated on the basis of the drained mass shall not exceed 5 percent by mass based on the average of 5 cans.

(4)The product shall have the odor, flavor and color characteristic of the species.

(5)The canned shrimp product may be presented as:

(a) Peeled shrimp- shrimp which have been headed and peeled without removal of the dorsal tract;

(b) Cleaned or de-veined – peeled shrimp which have had the back cut open and the dorsal tract removed at least up to the last segment next to the tail. The portion of the cleaned or de–veined shrimp shall make up 95% of the shrimp contents;

(c) Broken shrimp – more than 10% of the shrimp contents consist of pieces of peeled shrimp of less than four segments with or without the vein removed;

(d) Canned shrimp may be designated as to size in accordance with the actual count range declared on the label.

(c) Requirements.-

(i)Raw Material

1. Fish

The material used for preparation of canned finfish shall be from sound fish of the species in sub-section 2.1 and of a quality fit to be sold fresh for human consumption.

Heads and gills shall be completely removed, scales and tail may be removed. The fish may be eviscerated. If eviscerated it shall be practically free from visceral parts other than roe, milt or kidney. If ungutted, it shall be practically free from undigested feed or used feed.

2. Shrimp

Shrimp shall be prepared from sound shrimp of the species in sub-section 2.1 which are of a quality fit to be sold fresh for human consumption.

3. Crab meat

Canned crab meat shall be prepared from sound crab of the species specified, which are alive immediately prior to the commencement of processing and of a quality suitable for human consumption.

4. Mussels

The mussels shall be of sound quality and free from any evidence of spoilage and degradation.

5. Squid Rings

Squid rings shall be prepared from sound quality whole cleaned squids without any evidence of spoilage and deterioration.

(ii) Other Ingredients

The packing medium and all other ingredients used shall be of food grade quality and conform to all applicable standards prescribed in these regulations.

(iii) Decomposition

The raw material (fish) shall not contain more than 100 mg/Kg of histamine based on the average of the sample unit tested. This shall apply only to species of fish with potential to form hazardous level of histamine as mentioned in Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

(iv) Final Product

The product shall be free from foreign materials, filth and from grittiness. Other parameters like drained weight, disintegrated portion as % of drained weight, medium, percentage of water, vacuum, etc. are mentioned below:

S. No.	**Characteristics**	**Finfish**				**Crustaceans**		**Molluscs**	
		Tuna	**Mackerel**	**Sardine**	**Pomfret/ Seerfish**	**Shrimp / Prawn**	**Crab**	**Mussel**	**Squid**
1.	Medium	Oil	Oil Brine Curry Tomato Sauce	Oil Brine Curry	Oil	Brine	Brine	Oil	Brine
2.	Drained wt. as % of water capacity*	70	65	70	66	64	65	65	64
3.	% of water in the drained liquid**	5	10	10	10			5	-

4.	Disintegrated portion as % of drained weight (max)	5	5	5	5	5	5	5	5
5.	Vacuum (Minimum)	For round cans 100 mm and negative pressure in flat cans							
6.	Head Space	5-10 mm							
7.	Can Exterior	shall not be rusted, dented or bulged							

*A tolerance of ±5 percent is permitted

** Only applicable for oil medium

The percentage of sodium chloride in the final product of sardine and mackerel shall be 3.5 percent in the case of brine treated cans. The acidity of brine as citric acid anhydrous shall be between 0.06 and 0.20 percent (m/v).

(v) Contaminants, Toxins and Residues.-

The products covered in this standard shall comply with Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

The products covered in this standard shall comply with the microbiological requirements given in Appendix B of these regulations.

(vi) Food Additives.-

Only the food additives permitted under these regulations shall be used.

(vii) Hygienic.-

The product shall be prepared and handled in accordance with the guidelines provided in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(viii) Packaging and Labelling.-

(a) Canned products shall be packed in suitable containers, free from rust and hermetically sealed. Cans shall be lacquered, the lacquer used shall be non-toxic and shall be of such quality that it does not impart any foreign taste and smell to the contents of the cans and

does not peel off during processing and storage of the product. The lacquer shall not be soluble in oil or brine.

(b) The provisions laid down under Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged product.]

[36][**9. Frozen cephalopods**:

(a) frozen cephalopods means the raw frozen cephalopods and parts of raw cephalopods, as defined below and offered for direct consumption and for further processing.

(b) frozen cephalopods and parts of cephalopods are obtained from the following categories:

Category	***Family***
Squid	Loliginidae
	Onychoteuthidae
	Ommastrephidae
	Thysanoteuthidae
Cuttlefish	Sepiidae
	Sepiolidae
Octopus	Octopodidae

(c) The product after preparation shall be subject to a freezing process and shall comply with the following conditions:-

(i) the freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C or lower at the thermal centre after thermal stabilization;

(ii) the product shall be kept deep frozen so as to maintain the quality during transportation, storage and distribution;

(iii) frozen cephalopods and parts of cephalopods shall be processed and packaged so as to minimise dehydration and oxidation;

(iv) industrial repacking of intermediate frozen material under controlled conditions which maintain the quality of the product, followed by the reapplication of the quick freezing process as defined above is permitted.

(d) Requirements.-

(i) Frozen cephalopods shall be prepared from sound squid, cuttlefish or octopus which is of a good quality to be sold fresh for human consumption;

(ii) if glazed, the water used for glazing or preparing glazing solutions shall be of potable quality (IS 10500) or shall be clean sea-water, which meets the same microbiological standards as potable water and is free from potential contaminants.

(e) Food Additives.-

Only the food additives specified under these regulations shall be used.

(f) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specifed in Part-II of Schedule 4 of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and such guideline as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(g) Contaminants, Toxins and Residues.-

The products covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and shall conform to the microbiological requirements specified in Appendix B of these regulations.

(h) Packaging and Labelling.-

The products shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Packaging and Labelling), Regulations, 2011 and shall also apply to the pre-packaged products. The product shall be stored at -18°C or lower and shall be displayed on the label.

10. Smoked Fishery Products:

1. Smoked fishery products means the product smoked, smoke-flavoured and smoke-dried fish prepared from fresh, chilled or frozen raw material. It deals with whole fish, fillets and sliced and similar products thereof. The standard applies to fish, either for direct consumption or for further processing, or for addition into speciality or minced products where fish constitutes only part of the edible contents.

2. The product shall be of following types:

(i) smoked fish is prepared from fish that has undergone hot or cold smoking process. The smoke must be applied through one of the smoking processes defined in regulation 3.0 and

the end product must have smoked sensory characteristics. Spices and other optional ingredients may be used.

(ii) smoke-dried fish is prepared from fish that has undergone combined smoking and drying process and may include a salting process as described in regulation 3.0. The smoke must be applied through a traditional or industrial smoke-drying process and the end product must have smoke-dried sensory characteristics. Spices and other optional ingredients may be used.

(iii) smoke-flavoured fish is prepared from fish that has been treated with smoke flavours, without employing a smoking process as described in sub regulation 3.0. The end product must have a smoked taste. Spices and other optional ingredients may be used.

3. Process for smoked fish, smoke – dried fish and smoke-flavoured fish is as follows:

(i) smoking is a process of treating fish by exposing it to smoke from smouldering wood or plant materials. This process is usually characterised by an integrated combination of salting, drying, heating and smoking steps in a smoking chamber:

Provided that wood or other plant material for generation of smoke or smoke-condensates shall not contain toxic substances either naturally or through contamination, or after having been treated with chemicals, paint or impregnating materials and shall be handled in a way to avoid contamination:

Provided further that smoking of fish shall be done in a manner that minimises the formation of polycyclic aromatic hydrocarbons (PAH);

(ii) smoking by regenerated smoke is a process of treating fish by exposing it to smoke which is regenerated by atomizing smoke condensate in a smoking chamber under the time and temperature conditions similar to those for hot or cold smoking;

(iii) smoke condensates are products obtained by controlled thermal degradation of wood in a limited supply of oxygen (pyrolysis), subsequent condensation of the resultant smoke vapours, and fractionation of the resulting liquid products;

(iv) hot smoking is a process in which fish is smoked at an appropriate combination of temperature and time sufficient to cause the complete coagulation of the proteins in the fish flesh; hot smoking is generally sufficient to kill parasites, to destroy non-sporulating bacterial pathogens and to injure spores of human health concern;

(v) cold smoking is a process of treating fish with smoke using a time and temperature combination that will not cause significant coagulation of the proteins in the fish flesh but that will cause some reduction of the water activity;

(vi) salting is a process of treating fish with salt of food grade quality to lower water activity in fish flesh and to enhance flavour by any appropriate salting technology (e.g., dry salting, brining, injection salting);

(vii) drying is a process in which the moisture content in the fish is decreased to appropriate required characteristics under controlled hygienic conditions;

(viii) packaging is a process in which smoked fish is put in a container, either aerobically or under reduced oxygen conditions, including under vacuum or in a modified atmosphere;

(ix) storage is a process in which smoked fish is kept refrigerated or frozen to assure quality and safety of the product;

(x) smoke drying is a process in which fish is treated by combined smoking and drying steps to such an extent that the final product can be stored and transported without refrigeration and to achieve a water activity of 0.75 or less (10% moisture content or less), as necessary to control bacterial pathogens and fungal spoilage;

(xi) smoke flavours are either smoke condensates or artificial flavour blends prepared by mixing chemically-defined substances in known amounts or any combination of both (smoke-preparations);

(xii) smoke flavouring is a process in which fish or fish preparations are treated with smoke flavour. The smoke flavour can be applied by dipping, spraying, injecting, or soaking.

(d) Requirements.-

(i) smoked fish, smoke-flavoured fish and smoke-dried fish shall be prepared from sound and wholesome fish, which may be fresh, chilled or frozen, and of a quality to be sold for human consumption after appropriate preparation;

(ii) other ingredients shall be of food grade quality and conform to all applicable standards prescribed in these regulations.

(e) Food Additive.-

Only the food additives specified under these regulations shall be used.

(f) Hygienic Requirements.-

The product shall be prepared and handled in accordance with the guidelines specified in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(g) Contaminants, Toxins and Residues.-

The products covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and shall conforms to the microbiological requirements specified in Appendix B of these regulations.

(e) Packaging and Labelling.-

(i) the label shall declare storage and handling instructions appropriate for the product;

(ii) the provisions laid down under Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall apply to the pre-packaged products.

11. Ready –to-Eat Finfish or Shell Fish Curry in Retortable Pouches:

(a) Ready-to-Eat finfish or Shell fish curry in Retortable Pouches means the product thermal processed instant fish or shell fish curry in retortable pouches.

(b) Definition-

(i) Product Definition-

(1) Ready-To-Eat Finfish/Shellfish Curry in Retortable Pouches is prepared from finfish or shellfish species of sound quality without any visible sign of decomposition.

(2) The product is prepared from the edible portions of sound fish, packed in gravy of spices, vegetable fat and other ingredients appropriate to the product and heat processed by an appropriate manner after being sealed in a container so as to prevent spoilage.

(ii) Process Definition.-

Products are hermetically sealed and shall have received a processing treatment sufficient to ensure commercial sterility.

(iii) The product shall be presented in curry packing medium.

(c) Requirements.-

(i) Raw Material-

The material used for preparation of this product shall be from sound finfish or shellfish species and of a good quality to be sold fresh for human consumption.

For fish, heads and gills shall be completely removed, scales and tail may be removed. The fish may be eviscerated. If eviscerated, it shall be practically free from visceral parts other roe, milt or kidney. If ungutted, it shall be practically free from undigested feed or used feed. For shrimps, heads, shell, antennae shall be completely removed.

(ii) Other Ingredients-

The packing medium and all other ingredients used shall be of food grade quality and conform to all applicable standards prescribed in these regulations. No artificial colouring matter and firming agents shall be used.

(iii) Decomposition-

The total volatile base nitrogen (TVBN) level of raw material (fin fish or shell fish) should not exceed 35mg/100g.

(d) Final Product.-

(i) the finished product shall have the odour, flavour and colour characteristic of the product. The bones shall be soft and yielding;

(ii) the contents of the pouch on opening shall not display any appreciable disintegration. Pieces from which portions have separated out would be treated as disintegrated units. The percentage disintegrated portions of the fish, calculated on the basis of the drained mass shall not exceed 5 % based on the average of five pouches;

(iii) the product shall be free from foreign materials such as sand, dirt and insects, objectionable odour, or flavour;

(iv) the residual air in the pouch after processing shall be less than 2 % of the volume of the pouch contents;

(v) the average proportion of fish to curry in retort pouch shall be in the ratio of 60: 40.

(vi) the percentage of salt in the product shall be 1% to 2 %, maximum.

(e) Food Additives.-

Only those food additives specified under these regulations shall be used

(f) Processing.-

(i) The material shall be packed in retortable pouches, exhausted or vacuumized and heat-sealed. Exhausting can be done either by steam injection or hot filling to achieve residual air level of less than 2%.

(ii) Processing (Retorting) shall be done in over pressure autoclave till the product reaches a F_0 value of 8-10 minutes at the slowest heating point. The water used for cooling of retort pouches shall be as per IS 10500:2012 standards and chlorinated to maintain free residual chlorine of less than 2 mg/l.

(g) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guideline as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(h) Contaminants, Toxins and Residues.-

(i) The products covered in this standard shall comply with Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and shall also conforms to the microbiological requirements of thermally processed fishery products given in Table 1 of Appendix B of these regulations.

(i) Packaging and Labelling.-

(i) the retort pouches shall be packed in suitable retail containers to prevent physical impact during transportation.

(ii) retort pouch materials of food grade quality having the configuration of polyester/aluminium foil/cast polypropylene or four layers consisting of polyester/aluminium foil or aluminium oxide/nylon and cast polypropylene may be used. Other suitable packaging materials which can withstand high temperature and pressure can also be used.

(iii) the pouches shall be of food grade quality. The retort pouch shall have the mechanical properties as under:

Sr. No.	**Characteristics**	**Requirement**
1.	Tensile strength (Kgf/15 mm) machine direction	3.0-5.25

2.	Bond Strength (Kgf/15 mm)	0.225 – 0.750
3.	Heat seal strength (Kgf/15 mm), Min	4.60
4.	Bursting strength (Kg/cm^2), Min	1.74

(iv) the provisions laid down under the Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged product.

12. Sardine Oil:

(a) Sardine oil shall be prepared from fresh or well preserved or frozen sound wholesome sardine fish (*Sardinella longiceps*) either whole or dressed body portion (that is without head entrails and tail fin).

(b) The sardine oil shall be prepared by cooking pressing and separating oil from press liquor by centrifugation or by any other suitable means.

(c) Requirements.-

(i) Sardine oil shall be free from foreign matters in settled or suspended condition, and separated water. The product shall be a bright and clear liquid when heated to a temperature of 40°C.
(ii) it shall be free from any other kind of oil including mineral oils. It shall be free from foul and offensive putrefactive odour and should have only characteristic fish- oil odour.
(iii) it shall be of greenish straw light golden yellow or light brown colour.
(iv) product shall also conform to the requirement given in table below:

Table

Sr. No.	**Characteristics**	**Requirements**
1.	Free faty acids as percent oleic acid, w/w, max	1.0
2.	Moisture, percent by weight, max	0.5
3.	Iodine Value	145-180
4.	Saponifaction value	185-205
5.	Unsaponifiable matter, percent, w/w, max	2.0
6.	Refractive Index (40°C)	1.4739-1.4771

(d) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guideline as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(e) Contaminants, Toxins and Residues.-

The products covered in this Standard shall comply with Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and shall conformance to with the microbiological requirements specified in Appendix B of these regulations.

(f) Packaging and Labelling.-

The provisions laid down under Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged product.

13. Edible Fish Powder:

(a) Edible fish powder means the product prepared from non-oily white fish like sprats, either from a single species or their mixture. Fresh fish of edible quality which is normally consumed whole should be used for the preparation. Poisonous fish like marine snakes, elasmobranch fish with a high quantity of urea, oily fish and fish with black viscera are not considered suitable for preparation of edible fish powder.

(b) The fish need not be dressed but should be washed and cooked well for the preparation of the powder.

(c) Requirement.-

(i)Edible fish powder shall be a fine powder free from needle-like bones. It shall blend easily with cereal flours. It shall have a faint yellow colour and the characteristic flavour and taste of dry fish. It shall be free from rancidity and off-flavours.

(ii)No organic solvent or chemicals shall be used in its preparation.

(iii)Particle Size – Unless otherwise specified, the edible fish powder shall be of such fineness that it passes completely through a 100-mesh sieve.

(iv) The edible fish powder shall comply with the requirements given in Table below.

(v) The Protein Efficiency Ratio (PER) shall not be less than 2.5 (IS : 7481).

Table

Requirement for Edible Fish Powder

Sr. No. (1)	Characteristic (2)	Requirement (3)
1.	Moisture % by weight, Max	10
2.	Crude protein content (N X 6.25) on dry basis percent by weight, Min	65
3.	Total available lysine g/100g of Protein, Min	6
4.	Fat content on dry basis % by Weight, Max	6
5.	Ash on dry basis % by weight, Max	18
6.	Acid insoluble as on dry basis % by weight, Max	0.5

(d) Food Additives.-

Only the food additives permitted under these regulations shall be used.

(e) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in part-II of Schedule 4 of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(f) Contaminants, Toxins and Residues.-

Product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and conforms to the microbiological requirements specified in Appendix B of these regulations.

(g) Packaging and Labelling.-

(i) The edible fish powder shall be packed in clean sound containers made of tinplate, Post Consumer Recycled Content (PCR C) sheets, cardboard paper or other food grade material to protect it from spillage, contamination, migration of moisture, or air from the atmosphere and seepage of fat into the material through the packing material. When packed in flexible material, the packaging material shall be capable of withstanding handling during transportation. The edible fish powder shall not come in direct contact with packaging material other than grease proof or sulphate paper cellulose paper or any other non-toxic packing material which may be covered with moisture proof laminate or coated paper. When packed in metallic container, the container shall be airtight and completely filled to have minimum air, or the space shall be filled with inert gas or the content held in vacuum.

(ii) The provisions of the Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged products.

14. Fish Pickles:

(a) Fish pickle shall possess a good uniform colour and appearance and shall be practically free from defects, visible fungal growth and disintegration of meat.

(b) The material shall possess a good texture, shall not be unduly hard, or tough, and shall be free from development of any softening.

(c) Requirements,-

(i) Raw material;
(ii) Edible fish;
(iii) Spices and condiments such as ginger garlic, chillies, curry powder;
(iv) Edible common salt;
(v) Preservation media;
(vi) Vinegar (4 % acetic acid); and
(vii) Edible vegetable oils.

The product shall possess the characteristic pleasant aroma and flavour and shall be devoid of any objectionable off -taste smell or odour.

The material shall be free from artificial colouring matter and firming agents other than edible common salt and vinegar.

The material shall conform to the requirement specified in the Table below.

Table
Requirement for Fish Pickles

S. No.	Characteristics	Requirement
1.	Fluid portion % by weight, Max	40
2.	pH	4.0-4.5
3.	Acidity as acetic acid of fluid Portion % by weight, Max	2.5-3.0
4.	Sodium chloride % by weight, Max	12.0

(d) Food Additives.-

Only the food additives specified under these regulations shall be used.

(e) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified provided in Part-II of Schedule 4 of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(f) Contaminants, Toxins and Residues.-

Product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and conforms to microbiological requirements specified in Appendix B of these regulations.

(g) Packaging and Labelling.-

(i) fish pickles shall ordinarily be packed in glass containers or in food grade polyethylene pouches as may be found suitable so as to protect it from deterioration;

(ii) the provisions of the Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged products.

15. Frozen Minced Fish Meat:

(a) Frozen minced fish meat means the product frozen and defined below and offered for direct consumption and for further processing.

(b) Raw material.-

(i) clean and fresh fish which do not show any signs of degradation and spoilage shall be used;

(ii) the fish shall be gutted; the tail, entrails, bones, tips, skin, head and other non- edible portion shall be removed and eviscerated. Fish shall be washed thoroughly with clean potable water to remove the blood. The variety of fish used shall be specified;

(iii) the fish shall be properly iced and maintained at a temperature not exceeding 5˚C till transported to the freezing factory.

(c) Requirements.-

(i) Processing-

(1) fresh fish, shall be washed to make free of all foreign matter preferably by eighth chilled potable water (5˚C) having 5 mg/kg (ppm) of available chlorine and meat separated from fish in wholesome condition.

(2) the material shall be quick frozen at a temperature not exceeding -30˚C in polyethylene wrappers and packed in waxed cartons in the minimum possible time.

(3) the quick frozen material shall be stored in the cold storage at a temperature not less than -23 ˚C.

(ii) Finished Products.-

(1) The frozen minced fish meat, on thawing be clean and shall be found undamaged and free from defects. Deterioration, such as dehydration, oxidative rancidity and adverse

changes in the texture shall not be present. The product shall be free from foreign matter and finishing agents.

(2) The products shall conform to the requirements specified in the table below:

Table

Requirement for frozen minced fish meat

S. No. (1)	Characteristics (2)	Requirement (3)
1.	Colour of minced fish meat	Characteristic of the species
2.	Texture of the minced meat	Characteristic of the species
3.	Odour	Characteristic of the species, free from rancid, putrid of foreign odour
4.	Flavour	Characteristic of the species, sweetish and pleasant, free from spoilt or foreign flavour.
5.	Bone content, % by weight, Max	1.0

(iii) Food Additives.-
Only the food additives permitted under these regulations shall be used.

(iv) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in Part-II of Schedule 4 of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

(v) Contaminants, Toxins and Residues.-

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and conforms to the microbiological requirements specified in appendix B of these regulations.

(vi) Packaging and Labelling.-

The provisions of the Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged products.

16. Freeze dried prawns (shrimps):

(a) Freeze dried prawns (shrimps) means the product freeze dried prawns as defined below and

offered for consumption.

(b) The freeze dried prawns shall be of any edible species.

(c) Freeze dried prawns shall be of the following types:

(i) peeled, non-deveined and cooked – head and shell removed completely and cooked.

(ii) peeled, deveined and cooked – head, shell and dorsal tract removed and cooked.

(iii) cooked and peeled – peeled after cooking.

(d) Requirements.-

(i) The raw material shall be prepared from clean, wholesome and fresh prawns, and shall not show any visible sign of spoilage.

(ii) The colour of the raw material shall typically be of freshly caught prawns. The meat shall be firm and shall have the typical odour of freshly caught prawns. The material shall be free from any discoloration and off odours.

(iii) The water used in the processing of prawns shall be of potable quality and shall contain 5 mg/kg available chlorine.

(iv) The maximum value for moisture content shall be 2.0 percent.

(v) The extent of rehydration shall be minimum 300 percent (IS: IS 14949).

(vi) When observed visually, physical defects for various characteristics shall not exceed the values specified in the table below.

Table

Physical Defects for Various Characteristics

S. No. (1)	**Characteristic (2)**	**Requirement Percent by Count (3)**
1.	Deterioration with spoiled pieces	Nil
2.	Discoloration	3
3.	Black spots	Nil
4.	Broken and damaged pieces	2
5.	Leges, bits of veins etc.	Nil
6.	Foreign matter or filth	Nil

e) Food Additives.-

Only the food additives permitted under these regulations shall be used.

f) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in Part-II of the Schedule 4 of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

g) Contaminants, Toxins and Residues.-

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011and conform with the microbiological requirements specified in Appendix B of these regulations.

h) Packaging and Labelling

The provisions of the Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged products.

17. Frozen clam meat:

a) Frozen clam meat means the product frozen and as defined below and offered for consumption.

b) Frozen clam meat is the picked either raw or after heating from *Vallarta* species or *Meretrix* species or any other edible species of clams and frozen either raw or after cooking.

c) Frozen clam meat shall be of following types:

(i) Raw Frozen Clam Meat (RFCM), and
(ii) Cooked Frozen Clam Meat (CFCM)

Note.– The clams treated with hot water for opening the shell with the meat picked up from it and subsequently frozen shall not be treated as cooked variety.

d) The frozen clam meat shall have the characteristic appearance and colour. It shall be free from discolouration, deterioration, sand particles, pieces of shell, filth or any other foreign matter.

e) Requirements.-

The frozen clam meat shall have a soft and firm texture. The material shall be of reasonably uniform size with broken pieces of meat not exceeding 10 % by count.

f) Food Additives.-

Only the food additives permitted under these regulations shall be used.

g) Hygiene.-

The product shall be prepared and handled in accordance with the guidelines specified in Part-II of Schedule 4 of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and such guidelines as provided from time to time under the provisions of the Food Safety and Standard Act, 2006.

h) Contaminants, Toxins and Residues.-

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011and conform with the microbiological requirements specified in Appendix B of these regulations.

i) Packaging and Labelling.-

The provisions of the Food Safety and Standards (Packaging and Labelling), Regulations, 2011, shall apply to the pre-packaged products.]

[57][**18. Live and Raw Bivalve Molluscs:**

Standard specified in this clause shall apply to live bivalve molluscs and to raw bivalve molluscs that have been shucked or frozen or processed to reduce or to limit target organisms while essentially retaining the sensory characteristics of live bivalve molluscs. Raw bivalve molluscs are marketed either in a frozen or chilled state. Both live and raw bivalve molluscs may be intended for direct consumption or further processing. The standard does not apply to scallops when the final product is the adductor muscle only.

(1) LIVE BIVALVE MOLLUSCS

(a) Live bivalve molluscs are products that are alive immediately prior to consumption. Presentation includes the shell.

(b) Live bivalve molluscs are harvested alive from a harvesting area either approved for direct human consumption or classified to permit harvesting for an approved method of purification, e.g. relaying or depuration, prior to human consumption. Both relaying and depuration must be subject to appropriate controls implemented by the official agency having jurisdiction.

(c) Live bivalve molluscs shall possess organoleptic characteristics associated with freshness, as well as an adequate response to percussion (i.e. the shellfish will close by themselves when tapped) and freedom from extraneous matter, as determined by specialists familiar with the species concerned.

(d) Definition of defectives. - A sample unit shall be considered as defective when it exhibits any of the properties defined below, namely:-

(i) Foreign Matter .-The presence in the sample unit of any matter which has not been derived from bivalve molluscs, does not pose a threat to human health and is readily recognized without magnification or is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing and sanitation practices.

(ii) Dead or Damaged Product.- Dead product is characterized by no response to percussion (i.e. shellfish will close by themselves when tapped). Damaged product includes product that is damaged to the extent that it can no longer function biologically. A Sample unit shall be considered defective if dead or damaged bivalve molluscs exceed 5% by count.

(e) Live bivalve molluscs shall be labelled by weight, count, count per unit weight, or volume as appropriate to the product.

(f) Bivalve shall be alive when sold.

(2) RAW BIVALVE MOLLUSCS

(a) Raw bivalve molluscs processed for direct consumption or for further processing are products that were alive immediately prior to the commencement of processing.

(b) Raw bivalve molluscs shall be of a quality fit for human consumption.

(c) All ingredients used shall be of food grade quality and conform to these regulations.

(d) Definition of defectives.- The sample unit shall be considered as defective when it exhibits any of the properties defined below, namely:-

(i) Deep Dehydration.-greater than 10% of the weight of the bivalve molluscs in the sample unit or greater than 10% of the surface area of the block exhibits excessive loss of moisture clearly shown as white or abnormal colour on the surface which masks the colour of the flesh and penetrates below the surface, and cannot be easily removed by scraping with a knife or other sharp instrument without unduly affecting the appearance of the bivalve mollusks;

(ii) Foreign matter.- The presence in the sample unit of any matter which has not been derived from bivalve molluscs, does not pose a threat to human health and is readily recognized without magnification or is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing and sanitation practices;

(iii) Odour or flavor.- Persistent and distinct objectionable odours or flavours indicative of decomposition or rancidity;

(iv) Texture. - Textural breakdown of the flesh, indicative of decomposition, characterized by muscle structure that is mushy or paste-like.

(e) The label shall specify the conditions for storage and temperature that will maintain the product safety or viability during transportation, storage and distribution.

19. Sturgeon Caviar:

(1) Standard specified in this clause shall apply to granular sturgeon caviar of the fish of the *Acipenseridae* family.

(2) For the purposes of this clause,-

(a) "fish eggs" means non-ovulated eggs separated from the connective tissue of ovaries. ovulated eggs may be used from aquaculture sturgeons;

(b) "caviar" means the product made from fish eggs of the *Acipenseridae family* by treating with food grade salt.

(3) The product is prepared from fish eggs of sturgeon fishes belonging to the *Acipenseridae* family (four genera *Acipenser, Huso, Pseudoscaphirhynchus* and *Scaphirhynchus* and hybrid species of these genera).

(4) The eggs are of about one size and characteristically coloured according to the species used. Colour can vary from light grey to black or from light yellow to yellowish grey. Brownish and greenish shades are permissible.

(5) The product is made with addition of salt and is intended for direct human consumption. The salt content of the product shall be in the range of 3-5 g/100gm in the end product.

(6) The product, after suitable preliminary preparation of the caviar, shall be subject to treatment or conditions sufficient to prevent the growth of spore and non-spore forming pathogenic microorganisms and shall comply with the conditions laid down hereafter.

(7) Ovulated eggs are harvested after hormonal induction of ovulation of the female. The eggs are appropriately treated to remove adhesive layer and to harden the shell. Permitted harmones may be used to produce ovulated eggs.

(9) During packaging, storage and retail, the product temperature is between 2°C to 4°C, whereas for wholesale business, including storage and transportation, the temperatures are between 0°C to -4°C.

(10) Freezing as well as frozen storage of caviar is not permitted unless the deterioration of quality is avoided.

(11) The product shall be packed in any of the following, namely:-

(a) metal tins coated inside with stable food lacquer or enamel;

(b) glass jars;
(c) other suitable food-grade containers.

(12) Re-packaging of the product from larger to smaller containers under controlled conditions which maintain the quality and safety of the product shall be permitted. No mixing of caviar from different sturgeon species or lots shall be permitted.

(13) Essential Composition and Quality Factors.-

(a) caviar shall be prepared from fish eggs extracted from sound and wholesome sturgeons of biological species of the genera which are of a quality fit to be sold fresh for human consumption.

(b) Salt shall be of food grade quality and conform to sub-regulation 2.9.30.

(14) Definition of defects.- The sample unit shall be considered as defective when it exhibits any of the properties given below, namely:-

(a) Foreign matter.- The presence in the sample unit of any matter which has not been derived from sturgeon eggs, does not pose a threat to human health, and is readily recognised without magnification; or is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing practices and sanitation practices.

(b) Odour or flaovur.- The product affected by persistent and distinct objectionable odour or flavour indicative of decomposition, oxidation, or taste of feed (in fish reared in aquaculture), or contamination by foreign substances (such as fuel oil).

(c) consistency and condition.- The presence of hard cover of caviar grains that is not easily chewable or tenuous. The breaking up of the outer membranes when attempting to separate the grains. The Presence of broken eggs or fluid.

(d) Objectionable matter.- The presence of remnants of membranes or secreted fat in finished caviar shall be objectionable.

(15) Only those food additives permitted under these regulations shall be used. The use of colours and texturising agents is not allowed.

20. Fish Sauce:

(1) Standard specified in this clause shall apply to fish sauce produced by means of fermentation by mixing fish and salt and may include other ingredients added to assist the fermentation process. The product is intended for direct consumption as a seasoning, or condiment or ingredient for food. This standard does not apply to fish sauce produced by acid hydrolysis.

(2) Fish sauce is a translucent, not turbid liquid product with a salty taste and fish flavour obtained from fermentation of a mixture of fish and salt.

(3) The product is prepared by mixing fish with salt and is fermented in covered containers or tanks. Succeeding extractions may follow by adding brine to further the fermentation process in order to extract the remaining protein, fish flavour and odour. Other ingredients may be added to assist the fermentation process.

(4) Fish sauce shall be prepared from sound and wholesome fish or parts of fish in a condition fit to be sold fresh for human consumption.

(5) Organoleptic criteria shall be acceptable in terms of appearance, odour and taste as follows:

(a) Fish sauce must be translucent, not turbid and free from sediments except salt crystals;

(b) Fish sauce shall have an odour and taste characteristic of the product;

(c) This product shall be free from foreign matter.

(6) Product shall conforms the following chemical properties, namely:-

(a) Total nitrogen content: not less than 10 g/l. competent authorities may also specify a lower level of total nitrogen if it is the preference of that country;

(b) Amino acid nitrogen content: not less than 40% of total nitrogen content;

(c) pH: between 5.0 - 6.5 typical for a traditional product; but not lower than 4.5 if ingredients are used to assist fermentation;

(d) Salt: not less than 200g/l, calculated as NaCl.

(7) Definition of defectives.- The sample unit shall be considered as defective when it exhibits any of the properties defined below, namely:-

(a) Foreign Matter.- The presence in the sample unit of any matter which has not been derived from salt and fish, does not pose a threat to human health and is readily recognised without magnification or is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing and sanitation practices;

(b) Appearance.- The presence of any sediments (except NaCl crystals) or cloudiness;

(c) Odour.- A sample unit affected by distinct objectionable odour, e.g. rotten, putrid, rancid, gamey, pungent, etc.;

(d) Taste.- sample unit affected by distinct objectionable taste, e.g. bitter, sour, metallic, taint, etc.

21. Quick Frozen Fish Sticks (fish fingers), Fish Portions and Fish Fillets - Breaded or Battered:

(1) This standard applies to quick frozen fish sticks (fish fingers) and fish portions cut from quick frozen fish flesh blocks, or formed from fish flesh, and to natural fish fillets, breaded or batter coatings, singly or in combination, raw or partially cooked and offered for direct human consumption without further industrial processing.

(2) For the purposes of this clause,-

(a) a fish stick (fish finger) means the product which includes the average percent of fish flesh must not be less than 50 per cent of total weight. Each stick shall be not less than 10 mm thick. A fish portion including the coating may be of any shape, weight or size. Fish sticks or portions may be prepared from a single species of fish or from a mixture of species with similar sensory properties;

(b) fillets are slices of fish of irregular size and shape which are removed from the carcass by cuts made parallel to the back bone and pieces of such fillets, with or without the skin.

(3) The product after any suitable preparation shall be subjected to a freezing process and shall comply with the conditions laid down hereafter.

(4) The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallisation is passed quickly.

(5) The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18^0C or colder at the thermal centre after thermal stabilisation. The product shall be kept deep frozen so as to maintain the quality during transportation, storage and distribution.

(6) Industrial repacking or further industrial processing of intermediate quick frozen material under controlled conditions which maintains the quality of the product, followed by the re-application of the quick freezing process, is permitted.

(7) Quick frozen breaded or battered fish sticks (fish fingers) breaded or battered fish portions and breaded or battered fillets shall be prepared from fish fillets or minced fish flesh, or mixtures thereof, of edible species which are of a quality such as to be sold fresh for human consumption.

(8) The products shall not contain more than 10 mg/100 g of histamine based on the average of the sample unit tested. This shall apply all the species mentioned in list of histamine. to species of Clupeidae, Scombridae, Scombresocidae, Pomatomidae and Coryphaenedae families.

(9) Definition of defectives.- the sample unit shall be considered defective when it exhibits any of the properties defined below, namely:-

(a) Foreign Mater (cooked state).- The presence in the sample unit of any matter which has not been derived from fish (excluding packing material), does not pose a threat to human health, and is readily recognised without magnification or is present at a level determined by any method including magnification that indicates non-compliance with good manufacturing and sanitation practices;

(b) Bones (cooked state) (in packs designated boneless).- One bone per kg greater or equal to 10 mm in length, or greater or equal to 1 mm in diameter; a bone less than or equal to 5 mm in length, is not considered a defect if its diameter is not more than 2 mm. The foot of a bone (where it has been attached to the vertebra) shall be disregarded if its width is less than or equal to 2 mm, or if it can easily be stripped off with a fingernail;

(c) Odour and flavor.- A sample unit affected by persistent and distinct objectionable odour and flavours indicative of decomposition, or rancidity or of feed.

(d) Flesh abnormalities objectionable textural characteristics such as gelatinous conditions of the fish core together with greater than 86% moisture found in any individual fillet or sample unit with pasty texture resulting from parasites affecting more than 5% of the sample unit by weight.

(e) The product shall be stored at -18°C or lower and shall be declared on the label.

22. Fresh and Quick Frozen Raw Scallop Products:

(1) This standard applies to bivalve species of the *Pectinidae* family in the following product categories:

(a)"Fresh or Quick Frozen Scallop Meat", which is the scallop adductor muscle meat.

(b)"Fresh or Quick Frozen Roe-on Scallop Meat", which is the scallop adductor muscle meat and attached roe.

(c) Quick Frozen Scallop Meat", or "Quick Frozen Roe-on Scallop Meat", with added water and/or solutions of water and phosphates.

(2) Products covered by this Standard may be intended for direct human consumption or for further processing.

(3) This Standard does not apply to:

(a) scallop meat that is formed, mixed with extenders, or bound by fibrinogen or other binders and;

(b) whole scallops (live, fresh or frozen in which the shell and all viscera are attached). These products are included in the *Standard for Live and Raw Bivalve Molluscs.*

(4) For the purpose of this clause,-

(a) "fresh or quick frozen scallop meat" is prepared by completely removing the adductor muscle from the shell and completely detaching the viscera and roe from the adductor muscle

of live scallops. Scallop meat contains no added water, phosphates or other ingredients. The adductor muscle is presented whole;

(b) "fresh or quick frozen Roe-on Scallop meat" are prepared by completely removing the adductor muscle and attached roe from the shell and detaching all other viscera to the extent practical. The roe should remain attached to the adductor muscle. Roe-on scallop meat contain no added water, phosphates, or other ingredients. The adductor muscle and roe are presented whole;

(c) "Quick frozen Scallop Meat", or "Quick Frozen Roe-on Scallop Meat", with added water or solutions of water and phosphates contain the products, and a solution of water and/or phosphates and optionally salt.

(5) After the preparation of "Scallop Meat" or "Roe on Scallop Meat" under good hygiene practices, the products are rinsed, drained and stored with a method that minimises absorption of water to the extent that is technologically practicable. The fresh product shall be kept at 4°C or below. Product intended to be frozen shall be subjected to a freezing process carried out in appropriate equipment in such a way that the range of temperature of maximum crystallisation is passed quickly. The recognised practice of repacking quick frozen products under controlled conditions which will maintain the quality of the product, followed by the reapplication of the quick freezing process as defined, is permitted. These products shall be processed and packaged so as to minimise dehydration and oxidation.

Quick Frozen Scallop Meat or Quick Frozen Roe-on Scallop Meat Processed with Added Water or Solution of Water and Phosphates.

(6) The product shall be prepared from sound and wholesome scallops which are of a quality suitable to be sold quick frozen for direct human consumption. Added water and/or solution of water and phosphates and salt are permitted to the extent that the water uptake is accurately measured and labelled and their use is acceptable in accordance with the law or custom of the country in which the product is sold. Water shall be of potable quality, phosphates and salt shall be food grade. If glazed, the water used for glazing or for preparing glazing solutions shall be potable water or clean water.

(7) Definition of defectives.- The sample unit shall be considered as defective when it exhibits any of the properties defined below, namely:-

(a) Deep dehydration.- Greater than 10 per cent of the weight of the scallop meat or greater than 10 per cent of the surface area of the block exhibits excessive loss of moisture clearly shown as white or yellow abnormality on the surface which masks the colour of the flesh and penetrates below the surface, and cannot be easily removed by scraping with a knife or a sharp instrument without unduly affecting the appearance of the product;

(b) Foreign matter.- The presence in the sample unit of any matter which has not been derived from scallops, does not pose a threat to human health, and is readily recognised without

magnification or is present at a level determined by any method including magnification that indicates non-compliance with good manufacturing and sanitation practices;

(c) Odour, flaour, texture and colour.- Scallop meat affected by persistent and distinct objectionable odours, flavours, texture or colours indicative of decomposition and/or rancidity; or other objectionable odours, flavours, textures and colours not characteristic of the product;

(d) parasite.- The presence of parasites at an objectionable level;

(e) objectionable matter.- The presence of sand, shell or other similar particles that is visible in the thawed state or detected by chewing during sensory examination at an objectionable level;

(f) exceeding level of added water.- Level of added water exceeding that declared in the label.

(9) The label shall specify the conditions for storage and/or temperature that will maintain the product safety or viability during transportation, storage and distribution.

(10) The product shall be stored at 4°C or below for fresh products and at a temperature of -18°C or below for frozen product processed.]

[72][**23. Pasteurized Fish Sausage**:- (1) The term fish sausage refers to fish mince based product comprising fish mince, seasoning and spices, food additives, which are mixed thoroughly and stuffed into suitable casing and heat processed to achieve pasteurization. Fish sausage is an emulsion product wherein, myofibrillar proteins from fish are emulsifiers. The major myofibrillar protein fraction, myosin, is responsible for emulsion and texture of heat processed sausage. Pasteurized fish sausage is either ready to eat or can be cooked for further preparation.

(2) Any fish meat of acceptable quality for human consumption or surimi (separated fish flesh water washed, partially dehydrated, mixed with food grade additives, frozen and frozen stored) may be used for fish sausage preparation.

(3) Fish mince is mixed with different food grade additives, seasoning, spices and oil using bowl chopper. The resultant paste shall be stuffed into a suitable casing material (food grade) using stuffer. The stuffed casings shall be sealed or clipped with appropriate material using ringer or clipper. The stuffed and sealed sausages shall pasteurized (F value at 85^0C: 31 min; Z value: 8.9^{o}C) and cooled

immediately in chilled water at 4-5^{0}C for 10 min. The sausages shall be air dried and stored at refrigerated temperature (<3^{0}C).

(4) The sensory quality of the final product shall be characteristic of the fish used. It shall be free from off odor and devoid any foreign matter. The product shall not have swollen appearance nor phase separation of added oil and water.

(5) The product shall conform to the following requirements, namely:-

Table

Sl. No.	Characteristics / Properties	Requirement
1	Fish mince proportion (min)	65%
2.	Fat (max)	8 %
3.	Binding agent (Food grade starch)- (max)	9 %
4.	Seasoning and spices (max)	5 %

(6) Microbiological specification of pasteurised fish sausage shall be as per Convenience Fishery Products, (Item No. 15 of Microbiological Requirements for fish and fishery products as given under these regulations.)

(7) The level of additives can be same as per the edible casing (e.g. sausage casing) mentioned for food category 08.4 under these regulations.

(8) The products shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Labelling and Display), Regulations, 2020 and shall apply to the pre-packaged products. Fish sausages shall be packed in transparent food grade containers and best before use to be provided.

24. Pasteurised Crab Meat:- (1)Standards specified in this clause shall apply to crab meat that has been cooked, pasteurized and chilled, intended for direct consumption with or without cooking and for further processing.

(2) For the purpose of this clause,

(a) Dressing refers to the process of removing crab back shell, viscera and gills. In some cases it may also include the removal of walking legs and claws. Dressing may take place either before or after cooking

(b) Cooking refers to a heating method of crabs using potable water, clean sea water or brine for a period of time sufficient for the thermal centre to reach a temperature adequate to coagulate the protein.

(c) Hermetically sealed container refers to containers which are designed and intended to protect the contents against the entry of viable microorganisms after closing.

(d) Pasteurization means subjecting crab meat to heat at pre-determined time and temperatures, which inactivates pathogenic micro-organisms of public health concern without noticeable changes in appearance, texture and flavour of the product

(e) Picking refers to the process of removing meat from the crab shell by machine or by hand

(f) Struvite crystals refer to the transparent crystal of magnesium ammonium phosphate which forms during cooling stage following retorting and continues storage. The quantity of magnesium found in seafood and especially in the water used in processing the seafood can be sufficient to cause formation of these crystals during the normal shelf-life of the product.

(3) Pasteurized crab meat is a ready-to-eat product obtained from different parts of the crab, singly or in combination, packed in hermetically sealed containers, pasteurised and stored at chilled condition (<3^{o}C).

(4) Pasteurized crab meat shall be processed from live blue swimming crabs that have been subjected to the following general steps:

a) Washing, cooking, cooling, dressing, picking and sorting using appropriate methods;
b) Packed in cans or other appropriate containers;
c) Pasteurized at sufficient time and temperature; and
d) Cooled using appropriate method

(5) It is recommended that the crab meat shall be pasteurized to a minimum cumulative total lethality of $F_{85}{}^{o}{}_{C}$= 31 minutes, where z = 9^{0} C. Equivalent processes at different temperatures can be calculated using the z values provided.

(6) Any presentation of the product shall be permitted provided that it meets all requirements of this standard; and is adequately described on the label to avoid confusing or misleading the consumer.

(7) Pasteurised crab meat shall be prepared from sound crab, which are alive immediately prior to the commencement of processing and of a quality suitable for human consumption.

(8) All other ingredients used shall be of food grade quality and conform to all applicable FSSR requirements.

(9) The final product shall conform to the following quality requirements for fill of containers or net weight and sensory properties. Rigid container, like cans or plastic cups, shall be well filled with the product, which shall occupy not less than 90% (minus any necessary headspace according to good manufacturing practices) of the water capacity of the container. The water capacity of the container

is the maximum volume of distilled water at 20^0C that the sealed container can hold when completely filled.

(10) The product shall have the characteristic colour, odour, taste and texture of the raw material. The final product shall conform to the microbiological requirement as per Convenience Fishery Products, (Item No. 15 of Microbiological Requirements for fish and fishery products as given in these regulations.)

(11) Only Disodium diphosphate or Sodium acid pyrophosphate permitted as per Food Safety and Standards (Food products and Food additives), Regulations 2011 at maximum level of 10mg/kg shall be used.

(12) The products shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Labelling and Display), Regulations, 2020 and shall apply to the pre-packaged products. The product shall be packed in appropriate hermetically sealed containers, like cans and flexible containers (e.g. plastic cups) to safeguard the hygienic and other qualities of the food.

(13) Definition of defectives.- The sample unit shall be considered as defective when it exhibits any of the properties defined below, namely:-

(a) Foreign matter.-Presence of any matter in the sample unit which has not been derived from crab meat (excluding packing material), does not pose a threat to human health, and is readily recognized without magnification or is present at a level determined by any method including magnification that indicates non-compliance with good manufacturing and sanitation practices.

(b) Odour and flavour.-Distinct objectionable odours or flavours indicative of decomposition.

(c) Texture.-Soft and mushy texture

(d) Discoloration.-Distinct discolorations characterized by the following:

(i)Blue, brown, black discolorations exceeding 5% by weight of the drained contents; or,

(ii) Black sulphide staining of the meat exceeding 5% by weight of the drained contents

(e) Struvite crystals.-Any struvite crystals greater than 5 mm in length

(f) Shell bits.-Shell bits with 2 mm or greater, of more than ten (10) pieces.

(14) The products shall conform to the microbiological requirement given in Appendix B.

25. Gelatin from Fish Processing Waste.- (1)Gelatin is derived from collagen, which is a natural structural protein, predominantly found in connective tissue of fish and terrestrial animals. Collagen is the most ubiquitous of animal proteins. The fish processing waste comprising of skin, bones, swim bladder and scales are rich in collagen content.

(2) Generally Gelatin obtained from collagen involves three types of processing steps.

In the first step, raw materials are water washed to remove obvious impurities and then treated with alkali and /or acid to weaken the collagen structure by breaking the intermolecular cross-linkages including covalent and hydrogen bonds.

In the second step, the water extraction is performed at elevated temperature (usually > 40^0C) for an appropriate period of time.

In the last step, extracted gelatin is subjected to several separation methods, including filtration, evaporation and deionization followed by drying and grinding.

(3) Essential composition

(a) The gelatin may be classified as Type A or Type B depending on the method employed for extraction. If acid is used for extraction then it is Type Agelatin. If alkali is used for extraction then it is Type B. The pH of Type Agelatin should be in the range of 3.5-5.5 and that of Type B should be in the range of 6.5-7.5

(b)The moisture content of gelatin is in the range of 8-13%. The fat content should be <0.5% and ash content should be <2%. The elemental composition of gelatin is carbon – 50.5%; hydrogen – 6.8%; nitrogen-17%; and oxygen -25.2%.

(c) The amino acid composition of gelatin depends on the source of collagen used. The imino acid content (proline + Hydroxyproline) of gelatin from fish processing waste is lower than that from mammalian source. Glycine accounts for 30% of total residues.

(4) The quality of gelatin is determined by bloom value (gel strength), viscosity, melting and gelling temperature.

(5) For the purpose of this clause,-

(a) Bloom strength (gel strength).-Bloom is a measure of force (weight) required to depress a prescribed area of the surface of the sample a distance of 4 mm.

Based on bloom value obtained gelatins are classified to High bloom gelatin (>300g)' medium bloom gelatin (125-200 g); low bloom gelatin (<100g). Bloom value depends on amino acid composition and components of gelatin

(b) Viscosity.-The viscosity may be measured by simple viscometers or advanced rheometers. The gelatin with viscosity value of 4-6 mPa.s is acceptable.

(c) Melting and gelling temperature.-The gelling temperature of gelatin from fish processing waste varies from 8-24^{0}C and melting temperature varied from 10-28^{0}C. The use of Thermal Analysis and Rheometers are commonly used to determine the gelling and melting temperature.

(6) Microbiological specification shall be as per Convenience Fishery Products, (Item No. 15 of Microbiological Requirements for fish and fishery products as given under these regulations.)]

Insertion of this provision Operationalized vide Direction: F. No. Std/SP-10/T(Formaldehyde) dated 13th September, 2021

2.6.2. Limit of Formaldehyde-

(1) The amount of naturally occurring formaldehyde shall not exceed the limit prescribed in the column (3) for different species of fish as mentioned in the table given below: -

Table

Group & Species	**mg/kg, Max.**
Group - I (Marine)	
All finfishes (including Barracuda, Billfishes, Bombay Duck, Bullseyes, Catfishes, Croakers, Eels, Filefishes and Puffers, Flat fishes, Goatfishes, Groupers (Rock Cods), Half Beaks and Full Beaks, Horse Mackerel, Leather Jacket (Queen Fish), Mackerel, Mullets, Other Carangids, Other Clupeoids, Anchovies, Other Perches, Pigface Breams, Pomfrets, Ribbon Fish, Sardines, Seer Fishes/Spanish Mackerel, Silver Bellies/Biddies, Snappers, Tarpons, Threadfin Breams, Threadfins, Tuna and Bonitos, White Fish and any other commercial varieties), **elasmobranchs, crustaceans and molluscs except those under Group III & IV**	4.0
Group – II (Freshwater Origin)	
Finfishes (including Indian Major Carps, Minor Carps, Exotic Carps, Freshwater Catfishes, Snakeheads/Murrels, Tilapia, Trout and all other freshwater fin fishes), crustaceans and molluscans	
Group – III (Marine)	
Lizard fishes and any other marine fishes not covered under Group I	8.0
Group – IV (Frozen Stored marine fish products)	

All frozen stored marine fish products	100

Note- The above limits are subjected to revision on the basis of data collected over different seasons and geographical locations and upon analysis and recommendation by the scientific panel, as and when required.

(2) For fish and fish products of marine origin other than those mentioned in the table at Group I and II, the limit of naturally occurring formaldehyde shall not be more than 100 ppm.

2.7. **SWEETS & CONFECTIONERY:**

2.7.1 Sugar boiled confectionery:

Sugar boiled confectionery whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid, semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:—

(i) sweetening agents such as sugar, invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses;
(iv) malt extracts;
(v) edible starches;
(vi) edible oils and fats;
(vii) edible common salts;
(viii) fruit and fruit products and nut and nut products;
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) vitamins and minerals;
(xi) shellac (food grade) not exceeding 0.4 per cent by weight bee wax (food grade), paraffin wax (food grade), carnauba wax (food grade), and other food grade wax or any combination thereof;
(xii) edible desiccated coconut;
(xiii) spices and condiments and their extracts;
(xiv) candied peels;
(xv) enzymes;
(xvi) permitted stabilizing and emulsifying agents;
(xvii) edible foodgrains; edible seeds;
(xviii) baking powder;
(xix) gulkand, gulabanafsha, mulathi;
(xx) puffed rice;
(xxi) china grass;

(xxii) eucalyptus oil, camphor, menthol oil crystals, pepper mint oil;
(xxiii) thymol;
(xxiv) edible oil seed flour and protein isolates;
(xxv) gum arabic and other edible gum.
[15][(xxvi) Isomaltulose at 50 per cent. (Max) of the total sugars without adversely affecting the stability of the product]

It shall also conform to the following standards, namely:—

(i) Ash sulphated (on salt free basis) Not more than 2.5 per cent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 per cent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) Not more than 0.2 Per cent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 per cent.

Where the sugar boiled confectionery is sold under the name of milk toffee and butter toffee, it shall conform to the following additional requirements as shown against each;

(1) Milk toffee-
(i) Total protein (N x 6.25) shall not be less than 3 per cent by weight on dry basis.
(ii) Fat content shall not be less than 4 per cent by weight on dry basis.

(2)Butter toffee- fat content shall not be less than 4 per cent by weight on dry basis.

Provided that it may contain food additives permitted in these regulations including appendix 'A'.

Provided further that if artificial sweetener has been added as provided in Regulation 3.1.3, it shall be declared on the label as provided in regulation 3.1.3, it shall be declared on the label as provided inRegulation 2.4.5 (24, 25, 26, 28 & 29) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

2.7.2: Lozenges:

Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:—

(i) sweetening agents such as dextrose, dextrosemonohydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
(ii) milk and milk products;
(iii) nuts and nuts products;
(iv) malt syrup;
(v) edible starches;

(vi) edible common salt;
(vii) ginger powder or extracts;
(viii) cinnamon powder or extracts;
(ix) aniseed powder or extracts;
(x) caraway powder or extracts;
(xi) cardamom powder or extracts;
(xii) cocoa powder or extracts;
(xiii) protein isolates;
(xiv) coffee-extracts or its flavour;
(xv) permitted colouring matter;
(xvi) permitted emulsifying and stabilizing agents
(xvii) vitamins and minerals;
[15][(xviii) Isomaltulose at 50 per cent. (Max) of the total sugars without adversely affecting the stability of the product;]

It shall also conform to the following standards:

(i) Sucrose content	Not less than 85.0 per cent by weight.
(ii) Ash Sulphated (salt free basis)	Not more than 3.0 percent by weight
(iii) Ash insoluble in dilute Hydrochloric acid	Not more than 0.2 per cent by weight

The product may contain food additives permitted in these regulations including Appendix A.

Provided that if artificial sweetener has been added in the product as provided in the regulation 3.1.3, it shall be declared on the label as provided in Regulation 2.4.5 (24, 25, 26, 28 & 29) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

Provided further that if only permitted artificial sweetener is used in the products as sweetener, the requirement for sucrose prescribed in these standards shall not be applicable to such products.

2.7.3: Chewing gum and bubble gum

Chewing gum and bubble gum shall be prepared from chewing gum base, or bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).

The following sources of gum base may be used:—

(1) Babul, Kikar (Gum Arabic)
(2) Khair
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin

(10) Synthetic resin
(11) Glycerol ester or partially hydrogenated gum or wood rosin.
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:—

(a) Malt
(b) Milk powder
(c) Chocolate
(d) Coffee
(e) Gelatin, (food grade)
(f) Permitted Emulsifiers
(g) Water, potable
(h) Nutrients like Vitamins, minerals, proteins
[15][(i) Isomaltulose at 50 per cent. (Max) of the total sugars without adversely affecting the stability of the product]

It shall be free from dirt, filth, adulterants and harmful ingredients. it shall also conform to the following standards, namely:—

Ingredients	*Chewing gum*	*Bubble gum*
(i) Gum	Not less than 12.5 per cent by weight	Not less than 14.0 per cent by weight
(ii) Moisture	Not more than 3.5 per cent by weight	Not more than 3.5 per cent by weight
(iii) Sulphated Ash	Not more than 9.5 per cent by weight.	Not more than 11.5 per cent by weight.
(iv) Acid insoluble ash	Not more than 2.0 per cent by weight.	Not more than 3.5 per cent by weight.
(v) Reducing sugars (calculated as dextrose)	Not less than 4.5 per cent by weight.	Not less than 5.5 per cent by weight.
(vi) Sucrose	Not more than 70.0 per cent by weight.	Not more than 60.0 percent by weight.

Provided that it may contain food additives permitted in and these regulations Including Appendix A

Provided further, if artificial sweetener has been added as provided in Regulation 3.1.2 (1), it shall be declared on the label as provided in Regulation 2.4.5 (24, 25, 26, 28 & 29) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

Provided also, that, if only artificial sweetener is added in the product as sweeteners the

parameters namely, reducing sugars and sucrose prescribed in the table above shall not be applicable to such product

[29][2.7.4 Chocolate

1. Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa materials including cocoa beans, cocoa nib, cocoa mass (cocoa liquor/cocoa paste), cocoa press cake and cocoa powder (cocoa fines or cocoa dust), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat. The addition of vegetable fats other than cocoa butter shall not exceed 5 per cent of the finished product, after deduction of the total weight of any other added edible foodstuffs, without reducing the minimum contents of cocoa materials. The nature of the vegetable fats permitted for this purpose is specified in clause (ii) of paragraph 5 of these regulations.

2. The product may contain Isomaltulose at 50 per cent. (Max) of the total sugars without adversely affecting the stability of the product.

3. The material shall be free from rancidity or off odour, insect and fungus infestation, filth, adulterants and any harmful or injurious matter.

4. The chocolate shall be of the following types:

(i) milk chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter. Milk solids refers to the addition of milk ingredients in their natural proportion except that milk fat may be added or removed;

(ii) milk covering chocolate as defined above, but suitable for covering purposes;

(iii) plain chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter. Provided that dark chocolate shall contain, on a dry matter basis, not less than 35 per cent. total cocoa solids, of which not less than 18 per cent. shall be cocoa butter and not less than 14 per cent. fat-free cocoa solids;

(iv) plain covering chocolate is same as plain chocolate but suitable for covering purposes;

(v) blended chocolate means the blend of milk chocolate and plain chocolate in varying proportions;

(vi) white chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar;

(vii) filled chocolate means a product having an external coating of chocolate with a centre clearly distinct in its composition from the external coating, but does not include flour confectionery, pastry and biscuit products, the coating shall meet the requirements of one or

more of the chocolate types specified under paragraph 4 of this standard. The chocolate component of the coating shall not be less than 25 per cent. of the total mass of the finished product; centre filling(s) or component(s) shall comply with the standards specified under these regulations;

(viii) composite chocolate means a product containing at least 60 per cent of chocolate by weight and edible wholesome substances such as fruits, nuts and raisins. It shall contain one or more edible wholesome substances which shall not be less than 10 per cent. of the total mass of finished product;

(ix) praline means a product in a single mouthful size, where the amount of the chocolate component shall not be less than 25 per cent of the total weight of the product; the product shall consist of either filled chocolate or a single or combination of the chocolate specified under paragraph 4 of this standard.

(x) couverture chocolate shall contain, on a dry matter basis, not less than 35 per cent total cocoa solids of which not less than 31 per cent shall be cocoa butter and not less than 2.5 per cent fat-free cocoa solids

Provided that it may contain artificial sweeteners specified in Appendix A appended to these regulations and shall have labelling declarations specified under the Food Safety and Standards (Packaging and labelling) Regulations, 2011.

5. Optional ingredients

(a) In addition to the aforementioned ingredients, the chocolate may contain one or more of the substances given below, namely:-

I. edible salts;
II. spices and condiments and their extracts;
III. vitamins and minerals;
IV. permitted emulsifying and stabilizing agents;
V. permitted sequestering and buffering agents;

(b) the vegetable fat may be singly or in blends and shall comply with the following standards, namely:-

(I) they are non–lauric vegetable fats, which are rich in symmetrical monounsaturated triglycerides of the type POP (palmitic acid -oleic acid- palmitic acid), POSt (palmitic acid -oleic acid-stearic acid) and StOSt (stearic acid -oleic acid- stearic acid);

(II) they are miscible in any proportion with cocoa butter and are compatible with its physical properties (melting point and crystallization temperature, melting rate, need for tempering phase);

(III) they are obtained by the process of refining and /or fractionation, which excludes enzymatic modification of the triglyceride structure and in conformity with above standard, the following vegetable fats, obtained from the plants, may be used: Sal (Shorea robusta), Kokum gurgi (Garcinia indica), Mango kernel

(Mangifera indica), Palm oil (Elaeis guineensis and Elaeis olifera), Mahua Oil (Bassia latifolia or B. longifolia), Dhupa Fat (Vateria indica), Phulwara fat (Madhuca butyracea), and Dharambe fat (Garcinia cambogia) as Cocoa Butter Equivalents.

6. Chocolates shall also conform to the following standards namely:—

Sr. No.	**Characteristics**	**Requirements for**					
		Milk Chocolate	**Milk Covering Chocolate**	**Plain Chocolate**	**Plain Covering Chocolate**	**White Chocolate**	**Blended chocolate**
1	Total Fat (on dry basis) per cent by weight. Not less than	25	25	25	25	25	25
2	Milk fat (on dry basis) Per cent by weight. Not less than	2	2	-	-	2	-
3	Cocoa solids (on Moisture-free and fat free basis) per cent by weight	2.5	2.5	12	12	-	3.0
4	Milk Solids (on Moisture- free and Fat- free Basis) per cent by weight (Minimum)	10.5	10.5	-	-	10.5	1-9 (Range)
5	Acid insoluble ash (on moisture fat and sugar free basis) per cent by weight, Not more than	0.2	0.2	0.2	0.2	0.2	0.2

In case of chocolate which contain vegetable fats other than cocoa butter, it shall have the following label declaration in bold:

"CONTAINS VEGETABLE FAT IN ADDITION TO COCOA BUTTER".]

2.7.5: ICE LOLLIES OR EDIBLE ICES

1. "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit, fruit juices,[49][spices and condiments], cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and/or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

Ice Candy means the product obtained by freezing a pasteurized mix prepared from a mixture of water, nutritive sweeteners e.g. sugar, dextrose, liquid glucose, dried liquid glucose, honey, fruits and fruit products, coffee, cocoa, ginger, nuts and salt [49][spices and condiments]. The product may contain food additives permitted in these Regulations and Appendices. It shall conform to the microbiological requirements prescribed in Appendix B. It shall conform to the following requirement:—

Total sugars expressed as Sucrose ... Not less than 10.0 percent

[15][The ice lollies or edible ices and ice candy may contain Isomaltulose at 50 per cent. (max) of the total sugars without adversely affecting the stability of the product.]

[51][**2.7.6 Dry Mixtures of Cocoa and Sugars** (1) The standard applies to dry mixtures of cocoa and sugars intended for direct consumption. Dry Mixtures of Cocoa and Sugars is the product obtained from Cocoa Cake transformed into powder.

(2) Essential requirements:

(a) Moisture Content, per cent. by mass : Not more than 7 per cent. ;

(b) Dry Mixtures of Cocoa and Sugars:

Parameter	Cocoa Butter Content (as a minimum cocoa powder content on a dry matter basis)			
	Level	≥20per cent. m/m	≥10per cent. m/m but < 20per cent. m/m	< 10per cent. m/m
Cocoa powder content in dry mixtures	Not < 25per cent. m/m	Sweetened Cocoa, or Sweetened Cocoa Powder, or Drinking Chocolate	Sweetened Cocoa, Fat-reduced, or Sweetened Cocoa Powder, Fat-reduced, or	Sweetened Cocoa, Highly Fat-reduced or Sweetened Cocoa Powder, Highly Fat-reduced or

			Fat-Reduced Drinking Chocolate	Highly Fat-Reduced Drinking Chocolate
	Not < 20per cent. m/m	Sweetened Cocoa Mix, or Sweetened Mixture with Cocoa	Sweetened Cocoa Mix, Fat-reduced, or Sweetened Mixture with Cocoa, Fat-reduced:	Sweetened Cocoa Mix, Highly Fat-reduced or Sweetened Mixture with Cocoa, Highly Fat-reduced
	< 20per cent. m/m	Sweetened Cocoa-flavoured Mix	Sweetened Cocoa-flavoured Mix, Fat-reduced	Sweetened Cocoa-flavoured Mix, Highly Fat-reduced

(c) Chocolate Powder: Mixture of cocoa powder and sugars and/or sweeteners, containing not less than 32 per cent. wt/wt cocoa powder (29 per cent. wt/wt on a dry matter basis).

(3) Optional Ingredients

(a) Spices
(b) Salt (Sodium chloride)]

[56][2.7.7**: Cocoa Powder**

1. Description.-(a) Cocoa powder shall be the material obtained by mechanical transformation into powder form of cocoa press cake or cocoa mass resulting from the partial removal of fat from the ground nib of well-fermented sound roasted beans of *Theobroma cacao* L.

(b)It shall be in the form of powder, having characteristic taste and flavor.

(c) It shall be free from dirt, filth, deleterious substances, adulterant and added colouring matter and shall also be free from rancidity, off-flavour, mould growth and insect infestation.

(d) It shall also conform to the following standards, namely:-

S.No.	**Characteristics**	**Requirements (in per cent.)**		
		Cocoa Powder	**Fat reduced cocoa powder (Medium fat)**	**Highly Fat reduced cocoa powder (Low fat)**

1.	Moisture content by weight	Not more than 7.0	Not more than 7.0	Not more than 7.0
2.	Cocoa butter by weight (on dry basis)	Not less than 20.0	Not less than10.0-Not more than 20.0	Not more than 10.0
3.	Acid insoluble ash by weight (on moisture and fat-free basis)	Not more than 1.0	Not more than 1.0	Not more than 1.0
4.	Alkalinity of total Ash as K_2O by weight (on moisture and fat-free basis)	Not more than 12.0	Not more than 12.0	Not more than 12.0
5.	Crude fibre by weight (on moisture and fat-free basis)	Not more than 7.0	Not more than 7.0	Not more than 7.0

2.7.8: Cocoa mass or Cocoa/Chocolate Liquor and Cocoa Cake

1. Description.-(a) Cocoa (Cacao) Mass or Cocoa/Chocolate Liquor means product prepared by cocoa beans, the seeds of *Theobroma cacao* by adequate grinding of clean, practically shell free nibs (cotyledons) with or without roasting, and with or without removal or addition of any of its constituents.

(b) Cocoa Cake is the product obtained by partial or complete removal of fat from cocoa nib or cocoa mass.

(c) The products shall have their characteristic colour, odour and flavour and shall be free from any added colouring matter, flavour, or added fats other than Cocoa butter.

(d) It shall also conform to the following standards, namely:-

S.No.	**Characteristics**		**Requirements (in per cent.)**	
			Cocoa Mass	**Cocoa Cake**
1.	Moisture content by weight		Not more than 10.0	Not more than 10.0
2	Cocoa Shell and Germ % by weight	*Calculated on the fat free drymatter*	Not more than 5.0	Not more than 5.0
		Calculated on an alkali free basis (for cocoa shell only)	Not more than 1.75	Not more than 4.5

3.	Cocoa Butter % by weight	47.0 -60.0	Not applicable
4.	Alkalinity of total Ash as K_2O % by weight (on moisture and fat-free basis)	Not more than 12.0	Not more than 12.0
5.	Acid insoluble ash % (on moisture and fat-free basis)	Not more than 1.0	Not more than 1.0
6.	Crude fibre % by weight (on moisture and fat-free basis)	Not more than 7.0	Not more than 7.0]

2.8: Sweetening agents including Honey

2.8.1: SUGAR

1. **PLANTATION WHITE SUGAR** (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron filings, and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely: —

(a)	Moisture (when heated at 105 degree ± 1°C for 3 hours)	Not more than 0.5 per cent by weight.
(b)	Sucrose	Not less than 98 per cent by weight.

The product may contain food additives permitted in these Regulations and Appendices.

2. REFINED SUGAR means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:—

(a)	Moisture (when heated at $105^0 \pm 1^0$C for 3 hours)	Not more than 0.5 per cent by weight.
(b)	Sucrose	Not less than 99.5 per cent by weight.

The product may contain food additives permitted in these Regulations and Appendices.

3. KHANDSARI SUGAR obtained from sugarcane juice by open pan process may be of two varieties, namely:

(i) Khandsari Sugar Desi; and

(ii) Khandsari Sugar (sulphur) also known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:—

Khandsari Sugar (Sulphur *Khandsari Sugar*

	Sugar)	*(Desi)*
(i) Moisture (when heated at 105° ± 1° C for 3 hours)	Not more than 1.5 per cent by weight.	Not more than 1.5 per cent by weight.
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0.5 per cent by weight	Not more than 0.7 per cent by weight.
(iii) Sucrose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.

The product may contain food additives permitted in these Regulations and Appendices.

NOTE: - Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:

	Khandsari Sugar (Sulphur Sugar)	*Khandsari Sugar (Desi)*
(i) Conductivity (106 mho/cm2)	100-300 in 5% solution at 30ºC	Not more than 100 in 5% solution at 30ºC
(ii) Calcium oxide (mg/100gms)	Not more than 100	Not more than 50

The product may contain food additives in Appendix A

4. **BURA SUGAR** means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filing and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:—

(a) Sucrose	Not less than 90.0 per cent by weight.
(b) Ash insoluble in dilute hydrochloric acid	Not more than 0.7 per cent by weight.

The product may contain food additives permitted in these Regulations and Appendices.

5. CUBE SUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour, free from dirt and other extraneous contamination. It shall conform to the following standards :—

(a) Sucrose	Not less than 99.7 per cent by weight.
(b) Moisture	Not more than 0.25 per cent by weight.
(c) Total ash	Not more than 0.03 per cent by weight

The product may contain food additives permitted in these Regulations and Appendices.

6. **ICING SUGAR** means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white) sugar with or without edible starch. Edible starch, if added, shall be uniformly extended in the sugar. It shall be in form of white powder, free from dust, or any other extraneous matter.

The product may contain food additives permitted in these Regulations and Appendices. It shall conform to the following standards:—

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(c) Starch	Not more than 4.0 percent by weight on dry basis.

2.8.2: MISRI

1. **MISRI** means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:—

(a) Total ash	Not more than 0.4% by weight
(b) Total Sugar (Called, known or expressed as Sucrose)	Not less than 98.0% by weight

The product may contain food additives permitted in these Regulations and Appendices.

[51][2.8.3: Honey and it's by products:

1. Honey. -

(I) Honey shall be the natural sweet substance produced by honey bees from the nectar of blossoms or from secretions of plants, which honey bees collect, transform and store in honey combs for ripening. It shall possess pleasant aroma, sweet flavour and taste characteristic of honey.

Amendment for substitution of highlighted provision

[77][(I) Honey is the natural sweet substance produced by honey bees from the nectar of plants or from secretions of living parts of plants or excretions of plant sucking insects on the living parts of plants, which the bees collect, transform by combining with specific substances of their own, deposit, dehydrate, store and leave in the honey comb to ripen and mature.
a) Blossom Honey or Nectar Honey is the honey which comes from nectars of plants.
b) Honeydew Honey is the honey which comes mainly from excretions of plant sucking insects (Hemiptera) on the living parts of plants or secretions of living parts of plants]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

(II) Honey shall be free from organic and inorganic matter including visible mould, insects and insect debris, fragments of bees, brood, pieces of bees wax, grains of sand, and any other extraneous matter.

(III) Honey consists essentially of different sugars, predominantly fructose and glucose as well as other substances such as organic acids, enzymes and solid particles derived from honey

collection. The colour of honey varies from nearly colourless to dark brown. The consistency can be fluid, viscous or partly to entirely crystallised.

(IV) Honey sold as such shall not have added to it any food ingredient, including food additives, nor shall any other addition be made other than honey.

(V) Honey shall comply with the following requirements:

Sl. No.	Parameters	Limits
1.	Specific gravity at 27° C, Min.	1.35
2.	Moisture, per cent. by mass, Max.	20
3.	Total reducing sugars, per cent. by mass, Min.	65
	Carvia callosa and Honeydew honey, per cent. by mass, Min.	60
	Blends of Honeydew honey with blossom honey, per cent. by mass ,Min.	45
4.	Sucrose, per cent. by mass, Max.	5
	Carvia callosa and Honeydew honey, Max.	10
5.	Fructose to Glucose ratio (F/G Ratio)	0.95-1.50
6.	Total Ash, per cent. by mass, Max	0.50
7.	(a) Acidity expressed as formic acid per cent. by mass, Max,	0.20
	(b) Free Acidity milliequivalents acid/ 1000 g, Max	50.0
8.	Hydroxy Methyl Furfural (HMF) mg/kg, Max	80.0
9.	Diastase activity, Schade units, Min	3
10.	Water insoluble matters per cent. by mass, Max,	0.10
	For Pressed honey, per cent. by mass, Max.	0.5
11.	C4 Sugar, per cent. by mass, Max	7.0
12.	Pollen count/g , Min	25000
13.	Specific marker for Rice Syrup (SMR)	Negative

14.	Trace marker for Rice Syrup (TMR)	Negative
15.	Foreign oligosaccharides per cent. , Max.	0.1
16.	Proline, mg/kg, Min.	180
17.	Electrical Conductivity:	
	(a) Honeys not listed under Honeydew, Max.	0.8 mS/cm
	(b) Honeys listed under Honeydew, Min.	0.8 mS/cm
18.	(a) $\Delta\delta^{13}C$ Max (Maximum difference between all measured $\delta^{13}C$ values); per mil	± 2.1
	(b) $\Delta\delta^{13}C$ Fru – Glu (The difference in $^{13}C/^{12}C$ ratio between fructose and glucose); per mil	± 1.0
	(c) Δδ13C (per cent.) Protein – Honey (The difference in $^{13}C/^{12}C$ between honey and its associated protein extract) per mil	≥ – 1.0

Amendment for substitution of highlighted provision

[77][Sl. No.	Parameters		Limits
1.	Specific gravity at 27° C, Min.		1.35
2.	Moisture, per cent. by mass, Max.		20.0
3.	Total reducing sugars, per cent. by mass, Min.		
	(a)	For the Honey not listed below	65.0
	(b)	Carvia callosa and Honeydew honey	60.0
	(c)	Blends of Honeydew honey with blossom honey	45.0
4.	Sucrose, per cent. by mass, Max.		

	(a)	For the Honey not listed below	5.0
	(b)	Carvia callosa and Honeydew honey, Max.	10.0
5.	Fructose to Glucose ratio (F/G Ratio)		0.95-1.50
6.	Total Ash, per cent. by mass, Max.		0.50
7.	(a)Acidity expressed as formic acid, per cent. by mass, Max.		0.20
	(b) Free Acidity milliequivalents acid/ 1000 g, Max.		50.0
8.	Hydroxymethylfurfural (HMF) mg/kg, Max.		80.0
9.	Diastase activity, Schade units per gram, Min.		3.0
10.	Water insoluble matters, per cent. by mass, Max.		
	(a)	For the Honey not listed below	0.10
	(b)	For Pressed honey	0.5
11.	C4 Sugar, per cent. by mass, Max.		7.0
12.	Pollen count and plant element/g, Min.		5000
13.	2-Acetylfuran-3-Glucopyranoside (2-AFGP) as Marker for Rice Syrup		Absent**
14.	Foreign oligosaccharides (Max. Percent Peak Area)		0.7
15.	Proline, mg/kg, Min.		180.0
16.	Electrical Conductivity:		
	(a)	Honeys not listed under Honeydew, Max.	0.8 mS/cm
	(b)	Honeys listed under Honeydew, Min.	0.8 mS/cm
17.	(a) $\Delta\delta^{13}C$ Max*. (Maximum difference between all measured $\delta^{13}C$ values); per mil (‰)		± 2.1
	(b) $\Delta\delta^{13}C$Fru – Glu (The difference in $^{13}C/^{12}C$ ratio between fructose and glucose); per mil(‰)		± 1.0
	(c) $\Delta\delta^{13}C$ Protein – Honey (The difference in $^{13}C/^{12}C$ between honey and its associated protein extract); per mil(‰)		≥ – 1.0

*Δδ13C Max. is the maximum difference observed between all possible isotopic ratios measured (Δδ13C $_{\text{fructose-disaccharides}}$ / Δδ13C $_{\text{fructose-trisaccharides}}$/ Δδ13C $_{\text{fructose -protein}}$/Δδ13C $_{\text{glucose-disaccharides}}$ /Δδ13C $_{\text{glucose-trisaccharides}}$ /Δδ13C $_{\text{glucose-protein}}$/Δδ13C $_{\text{disaccharides-trisaccharides}}$/ Δδ13C $_{\text{disaccharides-protein}}$ /Δδ13C $_{\text{trisaccharides-protein}}$).

**Minimum Required Performance Level- 1mg/kg]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

(vi) Honey shall not be heated or processed to such an extent that its essential composition is changed and / or its quality is impaired.

(vii) Honey can be labelled according to floral or plant source, if it comes from any particular source, and has the organoleptic, physicochemical and microscopic properties corresponding with that origin:

(a) in the case of "Monofloral Honey", the minimum pollen content of the plant species concerned shall not be less than 45 per cent. of total pollen content; and

(b) in the case of "Multi floral Honey", the pollen content of any of the plant species shall not exceed 45 per cent. of the total pollen content.

Note: "Carvia callosa" is the honey derived from flower of *Carvia callosa* plant which is described as thixotrophic and is gel like extremely viscous when standing still and turns into liquid when agitated or stirred.

(viii)"Honeydew honey" is the honey which comes mainly from excretions of plant sucking insects of Order *Hemiptera* on the living parts of plants or secretions of living parts of plants.

Amendment for substitution of highlighted provision

[(VI) Honey shall not be heated or processed to such an extent that it's essential composition is changed and/or it's quality is impaired.

(VII) In addition to the labelling provisions as given in the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, the following specific provisions shall be applicable for labelling of honey:

(a) Honey shall be labelled as:

A. Honeydew Honey - If the product complies with the definitions given in part 1 (i) of this standard;

B. Blend of Honeydew Honey and Blossom Honey – If the product is mixture of Blossom or Nectar Honey and Honeydew honey

C. Carvia Callosa Honey - If the honey is derived from flower of *Carviacallosa* plant which is described as thixotrophic and is gel like extremely viscous when standing still and turns into liquid when agitated or stirred.

(b) If the honey is obtained by pressing broodless combs, honey shall be labelled as "Pressed Honey". If honey belongs to any of the categories mentioned at a) above and also falling into the category of pressed honey, it shall be labelled as

"Pressed Honeydew Honey" or "Pressed and Blend of Honeydew Honey and Blossom Honey" or "Pressed Carvia Callosa Honey".

(VIII) Honey may be labelled as follows, according to floral or plant source, if it comes from any particular source and has the organoleptic, physicochemical and microscopic properties corresponding with that origin. It shall be in addition to the labelling requirements as given at vii) above:

A. Monofloral Honey - If the minimum pollen content of the plant species concerned is not less than 45 percent of total pollen content;

B. Multi Floral Honey – If the pollen content of any of the plant species does not exceed 45 percent of the total pollen content.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

Amendment for insertion of new provision

[77][(IX) The said standards are applicable to packaged/ processed honey.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

2. Bees Wax.- (i) Beeswax is obtained from the honeycombs of bees (Family: *Apidae* e.g. *Apis mellifera* L) after the honey has been removed by draining or centrifuging. The combs are melted with hot water, steam or solar heat and the melted product is filtered and cast into cakes of yellow beeswax. White beeswax is obtained by bleaching the yellow beeswax with oxidizing agents, e.g. hydrogen peroxide, sulfuric acid, or sunlight.

Beeswax consists of a mixture of esters of fatty acids and fatty alcohols, hydrocarbons and free fatty acids; minor amounts of free fatty alcohols are also present.

(II) Description.- (a) Yellow beeswax: Yellow or light-brown solid that is somewhat brittle when cold and presents a dull, granular, non-crystalline fracture when broken; it becomes pliable at about 35°. It has a characteristic odour of honey.
(b) White beeswax: White or yellowish white solid (thin layers are translucent) having a faint and characteristic odour of honey.

(III) Requirements: When tested in accordance with method specified in JECFA for Beeswax (INS No. 901) shall conform to the following requirement:

Sl.No.	Parameter	Limit
1.	Solubility	Insoluble in water; sparingly soluble in alcohol; very soluble in ether
2.	Melting point range, °C	62 – 65

3.	Acid value	17 – 24
4.	Peroxide value, Max	5
5.	Saponification value	87 -104
6.	Carnauba wax	Absent
7.	Ceresin, paraffins and certain other waxes	Absent
8.	Fats, Japan wax, rosin and soap	Absent
9.	Glycerol and other polyols, per cent. by mass, Max.	0.5
10.	Lead, mg/kg, Max.	2.0
11.	Ash, per cent. by mass, Max.	0.50
12.	Total Volatile matter, per cent. by mass, Max.	0.75

3. Royal Jelly.- (a) Royal jelly is the mixture of secretions from hypopharyngeal and mandibular glands of worker bees, free from any additive. It is the food of larval and adult queens.
It is a raw and natural food, unprocessed except for filtration which does not undergo addition of substances. The color, taste and the chemical composition of royal jelly are determined by absorption and transformation by the bees fed with the following two types of foods during the royal jelly production time:

(i) type 1: only bee's natural foods (pollen, nectar and honey);
(ii) type 2: bee's natural food and other nutrients (proteins, carbohydrates)

(b) 10-hydroxy-*2*-decenoic acid (HDA): HDA is the characteristic component of royal jelly.

(c) Requirements,-

(i) Description Royal jelly is milky white, pale yellow, with lustre. It is pasty or jelly-like at normal temperature with fluidity, and shall be free from the bubble and foreign substances. Minor crystallization phenomena can occur naturally in royal jelly during storage.

(ii) Odor and taste: It is pungent, unfermented and shall not be rancid. It is acerb, spicy, and brings acrid taste to palate and throat.

(iii) Chemical requirements: Royal jelly shall comply with the requirements as follows:

Table - Chemical requirements of royal jelly

Sr.No.	Characteristic	Permissible limit	
		Type 1	Type 2
1.	Moisture content per cent. by mass, Max.	62-68.5	
2.	10-HDA per cent. by mass, Min.	1.4	
3.	Protein, per cent. by mass	11-18	
4.	Total sugar, per cent. by mass	7-18	
5.	Fructose, per cent. by mass	2-9	
6.	Glucose, per cent. by mass	2-9	
7.	Sucrose, per cent. by mass, Max.	3	NA*
8.	Erlose, per cent. by mass, Max.	0.5	NA*
9.	Maltose, per cent. by mass, Max.	1.5	NA*
10.	Maltotriose, per cent. by mass, Max.	0.5	NA*
11.	Total acidity, ml of 1 mol/l NaOH l/100 g	30.0-53.0	
12.	Total lipid, per cent. by mass	2-8	
13.	C13/C12 Isotopic ratio (δ ‰)	−29 to −20	−29 to −14

*NA = Not applicable

(iv) Furosine is an additional, optional quality parameter which shows freshness of royal jelly.]

2.8.4: GUR OR JAGGERY

1. **GUR OR JAGGERY** means the product obtained by boiling or processing juice [47][omit] extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards, on dry weight basis:-

Total sugars expressed as invert sugar less than	Not less than 90 percent and sucrose not 60 percent
Extraneous matter insoluble in water	Not more than 2 per cent.
Total ash	Not more than 6 per cent
Ash insoluble in hydrochloric acid (HCl)	Not more than 0.5 per cent

Gur or jaggery other than that of the liquid or semi liquid variety shall not contain more than 10% moisture. The product may contain food additives permitted in these Regulations and Appendices. Sodium bicarbonate, if used for clarification purposes, shall be of food grade quality.

[47][2. CANE JAGGERY OR CANE GUR:

(1) Cane Jaggery or Cane Gur: Cane Jaggery or Cane Gur means the product obtained by boiling or processing juice pressed out of sugarcane (Saccharum officinarum). It shall be free from substances unsafe to health and shall confirm to the following analytical standards on dry weight basis:-

Sl. No.	Characteristics	Permissible limit
1	Moisture, per cent. by mass, Max	7.0
2	Sucrose, per cent. by mass, Min	70.0
3	Total Sugars, Min	90.0
4	Reducing sugars, per cent. by mass, Max	20.0
5	Sulphate ash, per cent. by mass, Max	4.0
6	Ash insoluble in dilute hydrochloric acid, per cent. by mass, Max	0.5
7	Extraneous matter and water insoluble matter, per cent. by mass, Max	2.0

Sodium bicarbonate, if used for clarification purpose, shall be of food grade quality.

(2) Food Additives

Additives permitted under these regulations shall be used. Added colour shall not be permitted.

(3) Hygiene

The product shall be prepared and handled in accordance with the guidelines specified in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and any other guidelines as provided from time to time under the Act.

(4) Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

The product covered in this standard shall confirm to the microbiological requirements specified in Appendix B of these regulations.

(5) Packaging and Labelling The product shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.]

2.8.5: DEXTROSE

1. DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

Sulphated ash	Not more than 0.1 per cent on dry basis

Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator.
Glucose	Not less than 99.0 per cent on dry basis.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:—

The product may contain food additives permitted in these Regulations and Appendices.

2.8.6: GOLDEN SYRUP

1. **GOLDEN SYRUP** means the syrup obtained by inversion of sugar. It shall be golden yellow in colour, pleasant in taste and free from any crystallisation.

It shall conform to the following standards:—

Moisture	Not more than 25.0 per cent by weight
Total Ash	Not more than 2.5 per cent by weight
Total Sugar as invert sugar	Not less than 72.0 per cent by weight

The product may contain food additives permitted in these regulations including

Appendix A. Sodium bicarbonate, if used, for clarification purposes, shall be of Food

Grade Quality.

2.8.7 DRIED GLUCOSE SYRUP means the material in the form of coarse or fine, white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic. It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:—

Total solid contents	Not less than 93.0 per cent by weight.
Reducing sugar content	Not less than 20.0 per cent by weight.
Sulfated Ash	Not more than 1.0 per cent by weight.

The product may contain food additives permitted in these Regulations and Appendices.

[47][**2.8.8: Sodium Saccharin (Food Grade)-**

(1) Sodium Saccharinis white crystals or white crystalline powder. It is odour less or having a faint odour. It is intensely sweet to taste, even in dilute solution. 1 g is soluble in 1.5 ml of water and in about 50 ml of alcohol. When tested in accordance with method specified in Indian Standard, IS 5345, it shall conform to the following standards:

Sl. No.	Characteristics	Permissible limit
	Purity as $C_7H_4NNaO_3S$, after drying at 120°C for 4 h, per cent. by mass, min	99.0
	Moisture, per cent. by mass, Max	15.0
	Acidity and alkalinity	To pass the test
	Benzoate and salicylate	To pass the test
	Readily carbonizable substances	To pass the test
	Toluene sulfonamides, ppm, Max	25.0

(2) Hygiene The product shall be prepared and handled in accordance with the guidelines specified in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Regulation of Food Businesses) Regulations, 2011 and any other guidelines as provided from time to time under the Act.

(3) Contaminants, Toxins and Residues The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011. The products covered in this standard shall confirm to the microbiological requirements specified in Appendix B of these regulations.

(4) Packaging and Labelling The product shall comply with the packaging and labelling requirements as specified in the Food Safety and Standards (Packaging and Labelling) Regulations, 2011]

2.8.9: ASPARTYL PHENYL ALANINE METHYL ESTER (ASPERTAME)

1. Aspartyl Phenyl Alanine Methyl Ester commonly known as Aspertame, having empirical formula as $C_{14}\ H_{18}\ N_2\ O_5$ and molecular weight as 294.31 shall be the material which is slightly soluble in water and Methanole. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 ppm of Arsenic and 10 ppm of Lead.

The loss on drying of the material at 105^{o}C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-azine.

2.8.10: Acesulfame Potassium

1. Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3 ppm. Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centigrade for two hours shall not be more than 1 percent of its weight.

2.8.11: Sucralose

1. Sucralose:

Chemical name - 1, 6-Dichloro-1, 6-Dideoxy-β-D-Fructofuranosyl-4-Chloro-4-Deoxy-a-D-galactopyranoside;
Synonyms -4, 1 '6'-Trichlorogalactosucrose; INS 955
Chemical formula -
$C_{12}H_{19}CI_3O_8$ Molecular
weight- 397.64

It shall be white to off-white, odourless, crystalline powder, having a sweet taste. It shall be freely soluble in water, in methanol and in alcohol and slightly soluble in ethyl acetate. It shall contain not less than 98.0% and not more than 102.0% of $C_{12}H_{19}CI_3O_8$ calculated on anhydrous basis. It shall not contain more than 3PPM of Arsenic (as AS) and 10PPM or heavy metals (as Pb). It shall not contain more than 0.1% of methanol. Residue on ignition shall not be more than 0.7% and [73][water not more than 2.0%]

[47][**2.8.12: Calcium Saccharin (Food Grade)-** (1) Calcium Saccharin is white crystals or white crystalline powder. It shall be odourless or having a faint odour and an intensely sweet taste even in dilute solution. One gram is soluble in 1.5 ml of water. When tested in accordance with method specified in Indian Standard, IS 5345, it shall conform to the following standards:

Sl. No.	Characteristics	Permissible limit
	Purity as $C_{14}H_8CaN_2O_6S_2$, on dry basis, per cent. by mass, Min	99.0
	Moisture, per cent. by mass, Max	15.0
	Benzoate and salicylate	To pass the test
	Readily carbonizable substances	To pass the test
	Toluene sulfonamides, ppm, Max	25.0

(2) Hygiene
The product shall be prepared and handled in accordance with the guidelines specified in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Regulation of Food Businesses) regulations, 2011 and any other guidelines as provided from time to time under the Act.

(3) Contaminants, Toxins and Residues
The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011. The products covered in this standard shall confirm to the microbiological requirements specified in Appendix B of these regulations.

(4) Packaging and Labelling
The product shall comply with the packaging and labelling requirements specified in the Food Safety and Standards (Packaging and Labelling) Regulations, 2011].

2.9: SALT, SPICES, CONDIMENTS AND RELATED PRODUCTS

Note: (1) The extraneous matter wherever prescribed, shall be classified as follows:

a. Organic extraneous matter such as chaff, stems, straw

b. Inorganic extraneous matter such as dust, dirt, stones and lumpsof earth. This shall not exceed 2 percent by weight of the total Extraneous matter

(a) All the Spices, condiments and related products from 2.9.1 to 2.9.29 shall conform to the microbiological requirements given in table 3 of Appendix B.

2.9.1: Caraway (Siahjira):

1**. (Siahjira**) **whole** means the mericarps of nearly mature fruit of Carum carvi L. The fruits are split into two mericarps by thrashing after drying. It shall have characteristic flavour and shall be free from extraneous flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. It shall be free from attack by Screlotinia mushrooms. It shall be free from added colouring matter and other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Moisture	Not more than 13.0 percent by weight
(iii)	Total ash on dry basis	Not more than 8.0 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis.	Not more than 1.5 percent by weight
(v)	Volatile oil content on dry basis	Not less than 2.5 percent by (v/w).
(vi)	Insect damaged matter	Not more than 1.0 percent by weight

Blond Caraway (Carum carvi) whole is slightly larger and its colour is paler.

2. Caraway Black (Siahjira) Whole means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Moisture	Not more than 12.0 percent by weight
(iii)	Total ash on dry basis	Not more than 9.0 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(v)	Volatile oil content on dry basis	Not less than 1.5 percent by (v/w)
(vi)	Insect damaged matter	Not more than 1.0 percent by weight

1. **Caraway (Siahjira) powder** means the powder obtained by grinding the dried mature fruit of Carum Carvi L. without addition of any other matter. It may be in the form of small pieces of seeds or in finely ground form. It shall have characteristic flavour and shall be free from extraneous flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter and other harmful substances.

It shall conform to the following standards:—

(i)	Moisture	Not more than 12.0 percent by weight
(ii)	Total ash on dry basis	Not more than 8.0 percent by weight

(iii)	Ash insoluble in dilute HCl on dry basis	Not more than 1.5 percent by weight
(iv)	VolVolatile oil content on dry basis Black Blond	Not less than 2.25 percent by v/w Not less than 1.33 percent by v/w

2.9.2: Cardamom (Elaichi)

1. **Cardamom (Chhoti Elaichi) Whole** means the dried capsules of nearly ripe fruits of Elettaria cardamomum L. Maton Var. Minuscula Burkill. The capsules may be light green to brown or pale cream to white when bleached with sulphur dioxide. It shall have characteristic flavour free from any foreign odour, mustiness or rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. Thrip marks alone should not lead to the conclusion that the capsules have been infested with insects. The product shall be free from added colouring matter and other harmful substances.

It shall conform to the following standards:

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Empty and malformed capsules by count	Not more than 3.0 percent by count
(iii)	Immature and shrivelled capsules	Not more than 3.0 percent by weight
(iv)	Moisture	Not more than 13.0 percent by weight
(v)	Total ash on dry basis	Not more than 9.5 percent by weight
(vi)	Volatile oil content on dry basis	Not less than 3.5 percent by v/w
(vii)	Insect damaged matter	Not more than 1.0 percent by weight

2. **Cardamom (Chhoti Elaichi) seeds** means the decorticated seeds separated from the dried capsules of nearly ripe fruits of Elettaria Cardamomum L. Maton var miniscula Burkill. The seeds shall have characteristic flavour free from foreign odour, mustiness or rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and any other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Light seeds	Not more than 3.0 percent by weight
(iii)	Moisture	Not more than 13.0 percent by weight
(iv)	Total ash on dry basis	Not more than 9.5 percent by weight
(v)	Volatile oil content on dry basis	Not less than 3.5 percent by v/w
(vi)	Insect damaged matter	Not more than 1.0 percent by weight

Explanation :- Light seeds mean seeds that are brown or red in colour and broken immature and shrivelled seeds.

3. **Cardamom (Chhoti Elaichi) powder** means the powder obtained by grinding dried seeds of Elettaria Cardamomum L. Maton var miniscula Burkill without addition of any other substance. It may be in the form of small pieces of seeds or in finely ground form. It shall have characteristic flavour free from foreign odour, mustiness or rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added

colouring matter and other harmful substances.

It shall conform to the following standards:—

(i)	Moisture	Not more than 11.0 percent by weight
(ii)	Total ash on dry basis	Not more than 8.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis.	Not more than 3.0 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 3.0 percent by v/w.

4. **Large Cardamom (Badi Elaichi) whole** means the dried nearly ripe fruit (capsule) of Amomum subulatum Roxb. The capsule shall have characteristic flavour free from foreign odour, mustiness and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and any harmful substance.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Empty and malformed capsules by count	Not more than 2.0 percent by count
(iii)	Immature and shrivelled capsules	Not more than 2.0 percent by weight
(iv)	Moisture	Not more than 12.0 percent by weight
(v)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(vi)	Total ash on dry basis	Not more than 8.0 percent by weight
(vii)	Volatile oil content of seeds on dry basis	Not less than 1.0 percent by v/w.
(viii)	Insect damaged matter	Not more than 1.0 percent by weight

5. Large Cardamom (Badi Elaichi) seeds means the seeds obtained by decortication of capsules of Amomum subulatum Roxb. It shall have characteristic flavour free from foreign odour, mustiness and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Light seeds / Brown / Red seeds	Not more than 3.0 percent by weight
(iii)	Moisture	Not more than 12.0 percent by weight
(iv)	Total ash on dry basis	Not more than 8.0 percent by weight
(v)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(vi)	Volatile oil content on dry basis	Not less than 1.0 percent by v/w
(vii)	Insect damaged matter	Not more than 1.0 percent by weight.

6. Large Cardamom (Badi Elaichi) powder means the powder obtained by grinding seeds of Amomum subulatum Roxb, without the addition of any other substance. It may be in the form of small pieces of seeds or in finely ground form. The powder shall have characteristic flavour free from

off flavour, mustiness and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter and any harmful substance.

It shall conform to the following standards:—

(i)	Moisture	Not more than 11.0 percent by weight
(ii)	Total ash on dry basis	Not more than 8.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 1.0 percent by weight

2.9.3: Chillies and Capsicum (Lal Mirchi)

1. Chillies and Capsicum (Lal Mirchi) whole - means the dried ripe fruits or pods of the Capsicum annum L & Capsicum frutescens L. The pods shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Unripe and marked fruits	Not more than 2.0 percent by weight
(iii)	Broken fruits, seed & fragments	Not more than 5.0 percent by weight
(iv)	Moisture	Not more than 11.0 percent by weight
(v)	Total ash on dry basis	Not more than 8.0 percent by weight
(vi)	Ash insoluble in dilute HCl on dry basis	Not more than 1.3 percent by weight
(vii)	Insect damaged matter	Not more than 1.0 percent by weight

2. Chillies and Capsicum (Lal Mirchi) powder means the powder obtained by grinding clean ripe fruits or pods of Capsicum annum L and Capsicum frutescens L. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be dry, free from dirt, extraneous colouring matter, flavouring matter, mineral oil and other harmful substances. The chilli powder may contain any edible vegetable oil to a maximum limit of 2.0 percent by weight under a label declaration for the amount and nature of oil used.

It shall conform to the following standards:—

(i)	Moisture	Not more than 11.0 percent by weight
(ii)	Total ash on dry basis	Not more than 8.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis	Not more than 1.3 percent by weight
(iv)	Crude fibre	Not more than 30.0 percent by weight
(v)	Non-volatile ether extract on dry basis	Not less than 12.0 percent by weight

2.9.4: Cinnamon (Dalchini)

1. Cinnamon (Dalchini) whole means the inner bark of trunks or branches of Cinnamomum

Zeylanicum Blume. It shall have characteristic odour and flavour and shall be free from foreign flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter, foreign vegetable matter and other harmful substances.

It shall conform to the following standards:

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Moisture	Not more than 12.0 percent by weight
(iii)	Total ash on dry basis	Not more than 7.0 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(v)	Volatile oil content on dry basis	Not less than 0.7 percent by v/w
(vi)	Insect damaged matter	Not more than 1.0 percent by weight
[32][(vii)	Coumarin content (on dry basis)	Not more than 0.3 percent by weight]

2. Cinnamon (Dalchini) powder means the powder obtained by grinding inner bark of trunk or branches of Cinnamomum Zeylanicum Blume. The powder shall be yellowish to reddish brown in colour with characteristic odour and flavour and shall be free from off flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter, foreign vegetable matter and other harmful substances.

It shall conform to the following standards:—

(i)	Moisture	Not more than 12.0 percent by weight
(ii)	Total ash on dry basis	Not more than 7.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 0.5 percent by weight
[32][(v)	Coumarin content (on dry basis)	Not more than 0.3 percent by weight]

2.9.5: Cassia (Taj)

1**. Cassia (Taj) Whole** means the bark of trees of Cinnamomum Cassia (Nees) ex Blume, Cinnamomum aromaticum (Nees) Syn, Cinnamomum burmanii (C.G. Nees) blume and Cinnamomum loureini Nees. The product shall have characteristic odour and flavour and shall be free from off flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter, foreign vegetable matter and other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Moisture	Not more than 12.0 percent by weight
(iii)	Total ash on dry basis	Not more than 5.0 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis	Not more than 1.0 percent by weight

(v)	Volatile oil content on dry basis	Not less than 2.0 percent by v/w.

2. **Cassia (Taj) powder** means the powder obtained by grinding bark of trees of Cinnamomum Cassia (Nees) ex Blume, Cinnamomum aromaticum (Nees) Syn, Cinnamomum burmanii (CG Nees) Blume and Cinnamomum loureini Nees without addition of any other matter. The powder shall have characteristic odour and flavour and shall be free from off flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter, foreign vegetable matter and other harmful substances.

It shall conform to the following standards:

(i)	Moisture	Not more than 12.0 percent by weight
(ii)	Total ash on dry basis	Not more than 5.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis	Not more than 1.0 percent by v/w
(iv)	Volatile oil content on dry basis	Not less than 1.5 percent by weight

2.9.6: Cloves (Laung)

1**. Cloves (Laung)** Whole means the dried unopened flower buds of Eugenia Caryophyllus (C. Sprengel) Bullock and Harrision. It shall be of a reddish brown to blackish brown colour with a strong aromatic odour free from off flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. It shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Tendrils, Mother Cloves	Not more than 2.0 percent by weight
(iii)	Khokar Cloves	Not more than 2.0 percent by weight
(iv)	Moisture	Not more than 12.0 percent by weight
(v)	Volatile oil content on dry basis	Not less than 17.0 percent by v/w
(vi)	Headless cloves	Not more than 2.0 percent by weight
(vii)	Insect damaged cloves	Not more than 2.0 percent by weight

Explanation: (1) Headless Cloves: A Clove consisting of only the receptacle and sepals and which has lost the domed shaped head.

(2)**Khoker Cloves:** A Clove which has undergone fermentation as a result of incomplete drying as evidenced by its pale brown colour whitish mealy appearance and other wrinkled surface.

(3)**Mother Cloves**: A fruit in the form of a ovoid brown berry surmounted by four incurved sepals.

2. **Cloves (Laung) powder** means the powder obtained by grinding the dried unopened flower buds of Eugenia Caryophyllus (C. Sprengel) Bullock and Harrision without any addition. It shall be of a brown colour with a violet tinge and shall have a strong spicy aromatic odour free from off flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. It shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Moisture	Not more than 10.0 percent by weight
(ii)	Total ash on dry basis	Not more than 7.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis.	Not more than 0.5 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 16.0 percent by v/w
(v)	Crude Fibre	Not more than 13.0 percent by weight

2.9.7: Coriander (Dhania)

1. **Coriander (Dhania) whole** means the dried mature fruits (seeds) of Coriandrum sativum L. It shall have characteristic aroma and flavour. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter.
It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Split fruits	Not more than 10.0 percent by weight
(iii)	Damaged / Discoloured fruits	Not more than 2.0 percent by weight
(iv)	Moisture	Not more than 9.0 percent by weight
(v)	Volatile oil content on dry basis	Not less than 0.1 percent by v/w
(vi)	Total ash on dry basis	Not more than 7.0 percent by weight
(vii)	Ash insoluble in dilute HCl on dry basis.	Not more than 1.5 percent by weight
(viii)	Insect damaged matter	Not more than 1.0 percent by weight

2. **Coriander (Dhania) powder** means the powder obtained by grinding clean, sound, dried mature fruits of Coriandrum sativum L. It shall be in the form of rough or fine powder. It shall have typical aroma and shall be free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination; the powder shall be free from added colour, starch, bleach or preservative.
It shall conform to the following standards:—

(i)	Moisture	Not more than 9.0 percent by weight
(ii)	Volatile oil content on dry basis	Not less than 0.09 percent by v/w
(iii)	Total ash on dry basis	Not more than 7.0 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis.	Not more than 1.5 percent by weight

2.9.8: Cumin (Zeera, Kalonji)

[73][1. **Cumin (Safed Zeera) whole.-** means the dried mature seeds of *Cuminumcyminum* L. of the Apiaceae family. It shall have characteristic colour, aroma and flavour**.** It shall be free from live

insects, any foreign odour or flavour and mustiness. It shall be free from added colour and harmful substances.
(2) It shall conform to the following requirements, namely:-

TABLE

S. No.	Requirements	Limits
1	Moisture content, percent by mass (maximum)	10.0
2	Total ash, percent by mass on dry basis (maximum)	12.0
3	Acid insoluble ash, percent by mass on dry basis (maximum)	4.0
4	Volatile oil content, ml/100g, on dry basis (minimum)	1.5
5	Extraneous vegetable matter content, percent by mass (maximum)	3
6	Foreign matter content, percent by mass (maximum)	0.5
7	Mouldy seeds, percent by mass (maximum)	1.0
8	Proportion of damaged/defective fruits, percent by mass (maximum)	5.0
9	Broken, percent by mass (maximum)	3.0
10	Dead insects, insect fragments, rodent contamination , percent by mass (maximum)	0.5
11	Insect-damaged matter, percent by mass (maximum)	1.0
12	Animal excreta (mg/kg) , (maximum)	1.0
13	Uric Acid , mg/kg on dry basis (maximum)	100

Explanations.- for the purpose of this sub-regulation, -
(a) **Extraneous vegetable matter**.- Vegetative matter associated with the plant from which the product originates - but is not accepted as part of the final product‖
(b) **Foreign matter.-** Any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, burlap bagging, metal etc.
(c) **Damaged or defective fruits.-** Damaged, discoloured, shrivelled and immature seeds.
(d) **Insect-damaged matter**.- Cumin seeds that are damaged, discoloured or showing signs of bores as a result of infestation of insects so as to affect the quality of the materials.

(e) **Cracked.-** Broken into two or more pieces.

2. Cumin (Safed Zeera) powder.- (1) Cumin (Safed Zeera) powder means the powder obtained by grinding the dried mature seeds of *Cuminumcyminum* L of the Apiaceae family**.** It shall have characteristic aroma and flavour. It shall be free from any foreign odour or flavour and mustiness. It shall be free from mould, living and dead insects, insect fragments and rodent contamination. The product shall be free from added colour and harmful substances.
(2) It shall conform to the following requirements, namely:-

TABLE

S. No.	Requirements	Limits
1	Moisture content, percent by mass (maximum)	10.0
2	Total ash, percent by mass on dry basis (maximum)	9.5
3	Acid insoluble ash, percent by mass on dry basis (maximum)	1.5

4	Volatile oil content, ml/100g, on dry basis (minimum)	1.3
5	Uric Acid, mg/kg on dry basis (maximum)	100]

3. **Cumin Black (Kalonji) whole** means the seeds of Nigella sativa L. It shall have characteristic aromatic flavour free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colour and harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.5 percent by weight
(ii)	Broken fruits (Damaged, shrivelled, discoloured and immature seed)	Not more than 5.0 percent by weight
(iii)	Moisture	Not more than 10.0 percent by weight
(iv)	Total ash on dry basis	Not more than 8.0 percent by weight
(v)	Ash insoluble in dilute HCl on dry basis	Not more than 1.5 percent by weight
(vi)	Non volatile ether extract on dry basis	Not less than 12.0 percent by weight
(vii)	Volatile oil content on dry basis	Not less than 1.0 percent by v/w
(viii)	Edible seeds other than cumin black	Not more than 2.0 percent by weight
(ix)	Insect damaged matter	Not more than 1.0 percent by weight

4. **Cumin Black (Kalonji) powder** means the powder obtained by grinding the dried seeds of Nigella sativa L. It shall have characteristic aromatic flavour free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colour and harmful substances.

It shall conform to the following standards:—

(i)	Moisture	Not more than 10.0 percent by weight
(ii)	Total ash on dry basis	Not more than 7.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis	Not more than 1.5 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 0.9 percent by v/w
(v)	Non volatile ether extract on dry basis (ml/100gm)	Not less than 12.0 percent by weight

2.9.9: Fennel (Saunf)

1. **Fennel (Saunf) whole** means the dried ripe fruit of Foeniculum vulgare P. Miller Var. Vulgare. It shall have characteristic flavour free from foreign odour, mustiness and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and any harmful substance.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Defective seeds	Not more than 5.0 percent by weight
(iii)	Moisture	Not more than 12.0 percent by weight
(iv)	Total ash on dry basis	Not more than 10.0 percent by weight
(v)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(vi)	Volatile oil content on dry basis	Not less than 1.0 percent by v/w
(vii)	Edible seeds other than fennel	Absent
(viii)	Insect damaged matter	Not more than 1.0 percent by weight

2. **Fennel (Saunf) powder** means the power obtained by grinding ripe fruits (seeds) of Foeniculum Vulgare P. Miller Var Vulgare. The powder shall have characteristic aromatic flavour free from off flavour, mustiness and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter and any harmful substance.

It shall conform to the following standards:—

(i)	Moisture	Not more than 12.0 percent by weight
(ii)	Total ash on dry basis	Not more than 9.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis.	Not more than 2.0 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 1.0 percent by v/w

2.9.10: Fenugreek (Methi)

1. **Fenugreek (Methi)** Whole means the dried mature seeds of Trigonella foenum graecum L. The seeds shall be free from any off flavour, mustiness and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colour, and other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Moisture	Not more than 10.0 percent by weight
(iii)	Total ash on dry basis	Not more than 5.0 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis	Not more than 1.5 percent by weight
(v)	Cold water soluble extract on dry basis	Not less than 30.0 percent by weight
(vii)	Edible seeds other than fenugreek	Not more than 2.0 percent by weight
(viii)	Insect damaged matter	Not more than 1.0 percent by weight

2. **Fenugreek (Methi) powder** means the powder obtained by grinding the dried mature seeds of Trigonella foenum graecum L. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colour and other harmful substances.

It shall conform to the following standards:—

(i)	Moisture	Not more than 10.0 percent by weight
(ii)	Total ash on dry basis	Not more than 5.0 percent by

		weight
(iii)	Ash insoluble in dilute HCl on dry basis.	Not more than 1.5 percent by weight
(iv)	Cold water soluble extract on dry basis	Not less than 30.0 percent by weight

2.9.11: [56]**[Dried Ginger (Sonth, Dried Adrak)**

1. **Dried Ginger (Sonth, Dried Adrak)] whole** means the dried rhizome of Zingiber officinale Roscoe in pieces irregular in shape and size, pale brown in colour with peel not entirely removed and washed and dried in sun. It may be bleached with lime. It shall have characteristic taste and flavour free from musty odour or rancid or bitter taste. It shall be free from mould, living and dead insects, insect fragments, and rodent contamination. The product shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Moisture	Not more than 12.0 percent by weight
(iii)	Total ash on dry basis	
	(a) Unbleached	Not more than 8.0 percent by weight
	(b) Bleached	Not more than 12.0 percent by weight
(iv)	Calcium as Calcium oxide on dry basis	
	(a) Unbleached	Not more than 1.1 percent by weight
	(b) Bleached	Not more than 2.5 percent by weight
(v)	Volatile oil content on dry basis	Not less than 1.5 percent by v/w
(vi)	Insect damaged matter	Not more than 1.0 percent by weight

2. [56][**Dried Ginger (Sonth, Dried Adrak)] Powder** means the powder obtained by grinding rhizome of Zingiber officinale Roscoe. It shall have characteristic taste and flavour free from musty odour or rancid or bitter taste. It shall be free from mould, living and dead insects, insect fragments, and rodent contamination. The powder shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Moisture	Not more than 12.0 percent by weight
(ii)	Total ash on dry basis	
	(a) Unbleached	Not more than 8.0 percent by weight
	(b) Bleached	Not more than 12.0 percent by weight
(iii)	Calcium as Calcium oxide on dry basis	
	(a) Unbleached	Not more than 1.1 percent by weight
	(b) Bleached	Not more than 2.5 percent by

		weight
(iv)	Volatile oil content on dry basis	[56][Not less than 1.0 per cent]
(v)	Water soluble ash on dry basis	Not less than 1.7 percent by weight
(vi)	Acid insoluble ash on dry basis	Not more than 1.0 percent by weight
(vii)	Alcohol (90% v/w) soluble extract on dry basis	Not less than 5.1 percent by weight
(viii)	Cold water soluble extract on dry basis	[56][Not less than 10.9 per cent]

2.9.12: Mace (Jaipatri)

1. **Mace (Jaipatri) whole** means the dried coat or aril of the seed of Myristica fragrans Houttuyn. It shall not contain the aril of any other variety of Myristica nalabarica or Fatua (Bombay mace) and Myristica argenea (Wild mace). It shall have characteristic aromatic flavour free from foreign odour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 0.5 percent by weight
(ii)	Moisture	Not more than 10.0 percent by weight
(iii)	Total ash on dry basis	Not more than 4.0 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis.	Not more than 0.5 percent by weight
(v)	Volatile oil content on dry basis	Not less than 7.5 percent by v/w
(vi)	Insect damaged matter	Not more than 1.0 percent by weight
(vii)	Nutmeg in mace	Not more than 1.0 percent by weight

2. **Mace (Jaipatri) powder** means the powder obtained by grinding dried coat or aril of the seed of Myristica fragrans Houttuyn. It shall have characteristic aromatic flavour free from foreign odour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter.

The powder shall conform to the following requirements:—

(i)	Moisture	Not more than 10.0 percent by weight
(ii)	Total ash on dry basis	Not more than 3.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis	Not more than 0.5 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 5.0 percent by v/w
(v)	Crude fibre	Not more than 10.0 percent by

		weight
(vi)	Non-volatile ether extract	Not less than 20.0 and not more than 30.0 percent by weight.

2.9.13: Mustard (Rai, Sarson)

1. **Mustard (Rai, Sarson) whole** means the dried, clean mature seeds of one or more of the plants of Brassica alba. (L). Boiss (Safed rai), Brassica compestris L.var, dichotoma (Kali Sarson), Brasssica Compestris, L. Var, yellow Sarson, Syn, Brassica compestris L, var glauca (Pili Sarson), Brassica, compestris L. Var. toria (Toria), Barassica juncea, (L). Coss et Czern (Rai, Lotni) and Brassica nigra (L); Koch (Benarasi rai). It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from the seeds of Argemone Maxicana L, any other harmful substances and added colouring matter.

It shall conform to the following standards:

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Damaged or Shrivelled seeds	Not more than 2.0 percent by weight
(iii)	Moisture	Not more than 10.0 percent by weight
(iv)	Total ash on dry basis	Not more than 6.5 percent by weight
(v)	Ash insoluble in dilute HCl on dry basis	Not more than 1.0 percent by weight
(vi)	Non volatile ether extract on dry basis	Not less than 28.0 percent by weight
(vii)	Violatile oil content on dry basis	Not less than 0.3 percent by v/w
(viii)	Insect damaged matter	Not more than 1.0 percent by weight
(ix)	Allyl iso thiocyanate (m/m) on dry basis	
	(a) B nigra	Not less than 1.0 percent by weight
	(b) B Juncea	Not less than 0.7 percent by weight
(x)	P-hydroxybenzyl iso-thiocyanate (m/m) on dry basis in sinapist alba	Not less than 2.3 percent by weight
(xi)	Argemone seeds	Absent

2. Mustard (Rai, Sarson) powder means the powder obtained by grinding dried, clean mature seeds of one or more of the plants of Brassica alba. (L). Boiss (Safed rai), Brassica compestris L. var, dischotoma (Kali Sarson), Brassica Compestris, L. Var, (yellow Sarson), Syn, Brassica compestris L, var glauca (Pili Sarson), Brassica, compestris L. Var. toria (Toria), Barassicajuncea, (L). Coss et Czern (Rai, Lotni) and Brassica nigra (L); Koch (Benarasi rai) without addition of any other matter. It shall have characteristic pungent aromatic flavour free from rancidity and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from Argemone maxicana. L and other harmful substances. It shall also be free from added

colouring matter.

It shall conform to the following standards:

(i)	Moisture	Not more than 7.0 percent by weight
(ii)	Total ash on dry basis	Not more than 6.5 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis.	Not more than 1.0 percent by weight
(iv)	Non volatile ether extract on dry basis	Not less than 28.0 percent by weight
(v)	Volatile oil content on dry basis	Not less than 0.3 percent by v/w
(vi)	Crude fibre	Not more than 8.0 percent by weight
(vii)	Starch	Not more than 2.5 per cent by weight
(viii)	Test for argemone oil	Negative

2.9.14: Nutmeg (Jaiphal)

1. **Nutmeg (Jaiphal)** whole means the dried seed (kernel) of Myristica fragrans Houttuyn. It shall be of greyish brown colour but it may be white if it has been subjected to liming. It shall have characteristic aromatic flavour free from foreign odour and mustiness. It shall be free from mould, living and dead insects, insect fragments, and rodent contamination. The product shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Extraneous matter	Absent
(ii)	Mace in Nutmeg	Not more than 3.0 percent by weight
(iii)	Moisture	Not more than 10.0 percent by weight
(iv)	Total ash on dry basis	Not more than 3.0 percent by weight
(v)	Water insoluble ash on dry basis	Not more than 1.5 percent by weight
(vi)	Ash insoluble in dilute HCl on dry basis.	Not more than 0.5 percent by weight
(vii)	Volatile oil content on dry basis	Not less than 6.5 percent by v/w
(viii)	Calcium content expressed as Calcium Oxide on dry basis	Not more than 0.35 percent by weight

2. **Nutmeg (Jaiphal) powder** means the powder obtained by grinding the dried seeds (kernel) or Myristica fragrans Houttuyn. It shall have characteristic aromatic flavour free from foreign odour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Moisture	Not more than 8.0 percent by weight
(ii)	Total ash on dry basis	Not more than 3.0 percent by weight
(iii)	Water insoluble ash on dry basis	Not more than 1.5 percent by weight
(iv)	Ash insoluble in dilute HCl on dry basis	Not more than 0.5 percent by weight
(v)	Volatile oil content on dry basis	Not less than 6.0 percent by v/w
(vi)	Crude Fibre	Not more than 10.0 percent by weight
(vii)	Non volatile ether extract on dry basis	Not less than 25.0 percent by weight

2.9.15: Pepper Black (Kalimirch)

1. **Pepper Black (Kalimirch)** whole means the dried berries of Piper nigrum L., brown to black in colour with a wrinkled pericarp. The berries are generally picked before complete ripening and may be brown, grey or black in colour. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colour, mineral oil and any other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Light Berries	Not more than 5.0 percent by weight
(iii)	Pinheads or broken berries	Not more than 4.0 percent by weight
(iv)	Bulk Density (gm/litre)	Not less than 490 gm/litre by weight
(v)	Moisture	Not more than 13.0 percent by weight
(vi)	Total ash on dry basis	Not more than 6.0 percent by weight
(vii)	Non volatile ether extract on dry basis	Not less than 6.0 percent by weight
(viii)	Volatile oil content on dry basis	Not less than 2.0 percent by v/w
(ix)	Peperine Content on dry basis	Not less than 4.0 percent by weight
(x)	Insect damaged matter (percent by weight)	Not more than 1.0 percent by weight

Explanation:—

(a) Light Berry means berry that has reached an apparently normal stage of development but the kernel does not exist.

(b) Pinhead means berry of very small size that has not developed.

(c)Broken berry means berry that has been separated in two or more parts.

2. **Pepper Black (Kali Mirch) powder** means the powder obtained by grinding dried berries of Piper nigrum L without addition to any other matter. It shall have characteristic aromatic flavour free from foreign odour, mustiness or rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter, mineral oil and any other harmful substances.

It shall conform to the following standards:—

(i)	Moisture	Not more than 12.5 percent by weight
(ii)	Total ash on dry basis	Not more than 6.0 percent by weight
(iii)	Ash insoluble in dilute HCl on dry basis	Not more than 1.2 percent by weight
(iv)	Crude Fibre on dry basis	Not more than 17.5 percent by weight
(v)	Non volatile ether extract on dry basis	Not less than 6.0 percent by weight
(vi)	Volatile oil content on dry basis	Not less than 1.75 percent by v/w
(vii)	Peperine Content on dry basis	Not less than 4.0 percent by weight

3. **Light Black Pepper** means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould, living and dead insects, insect fragments, rodent contamination.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Other Foreign edible seeds	Not more than 2.0 percent by weight

4. **Pinheads** shall be wholly derived from the spikes of piper nigrum L. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. It shall be free from added colouring matter.

It shall conform to the following standards:—

Extraneous matter	Not more than 1.0 percent by weight

Amendment for substitution of highlighted provision

[75][2.9.15 **BLACK, WHITE & GREEN (BWG) PEPPERS.-** (1) Black, White & Green (BWG) peppers are the berries of *Piper nigrum*L. of the Piperaceae family having reached appropriate degree of development and/or maturity for the intended product purpose. Berries are treated in an appropriate manner to obtain the above products, by undergoing operations such as threshing, sieving and sifting, soaking, washing, blanching, drying or dehydrating, decorticating, grading, crushing and grinding. The product shall be free from foreign odours, flavours and free from any other harmful substances and added colours.

(a) **Black pepper –**It shall be dried berries having unbroken pericarp The product shall be whole with globular shape and wrinkled pericarp and shall have diameter of minimum 2.0 mm. It shall be brownish to dark brownish or blackish in colour. The flavours shall have a penetrating odour and hot, biting pungent taste characteristics of black pepper excluding mouldy and rancid odours.

(b) **White pepper** – It shall be dried berries after removing the pericarp. The product shall be whole with globular shape with smooth surface, slightly flattened at one pole and a small protuberance at the other and shall have diameter of minimum 1.8 mm. It shall be matt grey to brownish to pale ivory white. The odour and flavour shall be characteristic of white pepper, slightly sharp and very aromatic, excluding mouldy and rancid odours.

(c) **Green pepper** –It shall be obtained from green berries by removal of moisture under controlled conditions. The product shall be whole with globular shape with or without wrinkled pericarp and shall have diameter of minimum 2.0 mm. It shall be characteristic green, greenish or dark greenish. The product shall have pungent odour and flavour characteristic of green pep-per, free from rancidity, mustiness, bitter taste and extraneous flavour.

(2) BWG peppers can be of any one of the following forms:

(a)Whole

(b)Cracked/crushed –broken into two or more pieces.

(c)Ground–processed into powders.

(3) The product shall confirm to the following requirements, namely:-

For Whole Peppers				
S. No.	**Requirements**	**Black**	**White**	**Green**
1.	Moisture content, percent by mass (*Maximum*)	13.0	12.0	12.0
2.	Total Ash, percent by mass on dry basis, (Maximum)	7.0	4.0	5.0
3.	Acid-insoluble ash, percent by mass on dry basis, (*Maximum*)	1.5	0.3	0.3
4.	Volatile oil content, ml/100g, on dry basis (*Minimum*)	1.0	1.0	1.0
5.	Non-volatile ether extract, % (m/m) min, on dry basis.	6.0	6.0	0.3
6.	Piperine content, % (m/m), min, on dry basis.	2.0	3.0	NA
7.	Bulk density, (g/l), min.	400	550	NA
8.	Light berries, % (m/m) max.	10.0	2.0	NA
9.	Extraneous vegetable matter,% (m/m), max.	2.0	2.0	1.2
10.	Foreign matter, % (m/m), max.	0.5	0.5	0.5
11.	Black berries/corns % (m/m), max.	NA	10.0	5.0
12.	Broken berries, % (m/m), max.	NA	3.0	10.0
13.	Mouldy Berries, % (m/m), max.	3.0	3.0	2.0
14.	Insect defiled berries /Corns, % (m/m), max.	2.0	2.0	2.0
15.	Mammalian or/and other excreta, (mg/kg), max.	2.0	2.0	2.0
16.	Pinheads for black pepper, % (m/m), max.	4.0	NA	NA

For Ground/powdered/crushed pepper				
S. No.	**Requirements**	**Black**	**White**	
1.	Moisture content, % (m/m), max.	12.0	13.0	
2.	Total ash by mass, % (m/m), on dry basis, max.	6.0	3.5	
3.	Non-volatile ether extract, % (m/m) ,on dry basis, min.	6.0	6.0	
4.	Volatile oil* , % (ml/100g), on dry basis, min.	1.0	0.7	
5.	Crude fibre, insoluble index, % (m/m)on dry basis, max.	17.5	6.5	
6.	Piperine, % (m/m), on dry basis, min.	2.0	3.0	
7.	Acid insoluble ash, % (m/m) on dry basis, max.	1.2	0.3	

Explanations: for the purpose of this clause,

a) **Light berries** (in Black and White peppers only) -Generally immature berries without kernel with an apparent density lower than 0.30g/mL or300 g/L.

b) **Extraneous vegetative matter**-Vegetative matter associated with the plant from which the product originates -but is not accepted as part of the final product. Light berries, pinheads or broken berries are not considered as extraneous matter.

c) **Foreign matter**-Any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, burlap bagging, metal

d) **Pinheads**–Developed from unfertilized flowers, berries with a diameter of less than 2 mm with more angularity than normal berries, they have soft texture (collapse under heavy pressure) and have less odour and flavour than pepper berries.

e) **Insect defiled berries:** Berries or corns damaged by insects.

(4) *{The product covered under these standards shall be labelled in accordance with the Food Safety and Standards (Labelling and Display) Regulation, 2020. In addition, the forms of the product shall also be mentioned on the label. The name of the product shall be "Black Pepper" (pepper corn), "White Pepper" or "Green Pepper".}]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022;

**FBOs to comply with the provisions by 1st July 2022 vide vide Direction: F.No. REG/L&D-Extension/FSSAI-2021 dated 22nd October, 2021]*

2.9.16: Poppy (Khas Khas)

1. Poppy (Khas Khas) whole means the dried mature seeds of *Papaver somniferum* L. It may be white or greyish in colour with characteristic flavour free from off flavour, mustiness and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and any other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Moisture	Not more than 11.0 percent by weight
(iii)	Non volatile ether extract on dry basis	Not less than 40.0 percent by weight

2.9.17: Saffron (Kesar)

1. **Saffron (Kesar)** means the dried stigmas or tops of styles of Crocus Sativus Linnaeus. It shall be dark red in colour with a slightly bitter and pungent flavour, free from foreign odour and mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Floral waste	Not more than 10.0 percent by weight
(iii)	Moisture and volatile matter at 103 ± ºC	Not more than 12.0 percent by weight
(iv)	Total ash on dry basis	Not more than 8.0 percent by weight
(v)	Ash insoluble in dilute HCl on dry basis	Not more than 1.5 percent by weight
[19](vi)	Solubility in cold water on dry weight Basis	Not more than 65.0 percent by weight
(vii)	Bitterness expressed as direct reading of absorbance of picrocrocine at about 257 nm on dry basis	Not less than 30.0 percent by weight
(viii)	Safranal expressed as direct reading of absorbance of 330 nm on dry basis	Not less than 20.0 percent by weight and not more than 50.0 percent by weight
(ix)	Colouring strength expressed as direct reading of absorbance of 440 nm on dry basis	Not less than 80.0 percent by weight
(x)	Total Nitrogen on dry basis	Not more than 2.0 percent by weight
(xi)	Crude Fibre on dry basis	Not more than 6.0 percent by weight

Explanation:- Floral waste means yellow filaments that are unattached and separated pollens, stamens, parts of ovaries and other parts of flowers of Crocus sativus Linnaeus.

2. **Saffron (Kesar) powder means** the powder obtained by crushing dried stigmas of Crocus Sativus Linnaeus. It shall be dark red in colour with a slightly bitter and pungent flavour, free from foreign odour and mustiness.

It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The

powder shall be free from added colouring matter.

It shall conform to the following standards:—

(i)	Moisture and volatile matter	Not more than 10.0 percent by weight
(ii)	Total ash on dry basis	Not more than 8.0 percent by weight
(iii)	Acid insoluble ash on dry basis	Not more than 1.5 percent by weight
(iv)	Solubility in cold water on dry weight basis	Not more than 65.0 percent by weight
(v)	Bitterness expressed as direct reading of absorbance of picrocrocine at about 257 nm on Dry basis	Not less than 30.0 percent by weight
(vi)	Safranal expressed as direct reading of absorbance of 330 nm on dry basis	Not less than 20.0 percent by weight and not more than 50.0 percent by weight
(vii)	Colouring strength expressed as direct reading of absorbance of 440 nm on dry basis	Not less than 80.0 percent by weight
(viii)	Total Nitrogen on dry basis	Not more than 3.0 percent by weight
(ix)	Crude Fibre on dry basis	Not more than 6.0 percent by weight

2.9.18: Turmeric (Haldi)

1. **Turmeric (Haldi) whole** means the primary or secondary rhizomes commercially called bulbs or fingers of Curcuma Longa L. The rhizomes shall be cured by soaking them in boiling water and then drying them to avoid regeneration. The rhizome be in natural state or machine polished. The product shall have characteristic odour and flavour and shall be free from mustiness or other foreign flavours. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from Lead Chromate added starch and any other extraneous colouring matter.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 1.0 percent by weight
(ii)	Defective Rhizomes	Not more than 5.0 percent by weight
(iii)	Moisture	Not more than 12.0 percent by weight
(iv)	Insect damaged matter	Not more than 1.0 percent by weight
(v)	Test for lead chromate	Negative

Explanation :- Defective rhizomes consist of shrivelled fingers and or bulbs internally damaged, hollow or porous rhizomes scorched by boiling and other types of damaged rhizomes.

2. **Turmeric (Haldi) powder** means the powder obtained by grinding dried rhizomes or bulbous roots of Curcuma Longa L. The powder shall have characteristic odour and flavour and shall be free from mustiness or other foreign odour. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from any added colouring matter including Lead Chromate and morphologically extraneous matter including foreign starch.

It shall conform to the following standards:—

(i)	Moisture	Not more than 10.0 percent by weight

(ii)	Total ash on dry basis	Not more than 9.0 percent by weight
(iii)	Ash insoluble in dil. HCl on dry basis	Not more than 1.5 percent by weight
(iv)	Colouring power expressed as curcuminoid content on dry basis	Not less than 2.0 percent by weight
(v)	Total Starch	Not more than 60.0 percent by weight
(vi)	Test for lead chromate	Negative

2.9.19: CURRY POWDER

1. **CURRY POWDER** means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace, nutmeg, curry leaves, white pepper, saffron and aniseeds. The material may contain added starch and edible common salt. The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt.

The curry powder shall also conform to the following standards:—

Moisture	Not more than 14.0 percent by weight
Volatile oil	Not less than 0.25 percent (v/w) on dry basis
Non-volatile ether extract	Not less than 7.5 per cent by weight on dry basis.
Edible common salt	Not more than 5.0 per cent by weight on dry basis
Ash insoluble in dilute HCl	Not more than 2.0 per cent by weight on dry basis.
Crude Fibre	Not more than 15.0 percent by weight on dry basis
Lead	Not more than 10.0 p.p.m on dry basis

2.9.20: MIXED MASALA

1**. MIXED MASALA (WHOLE)** means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight, out of which the proportion of organic matter including foreign edible seeds and inorganic matter shall not exceed three per cent and two per cent respectively.

[66][**2. MIXED MASALA POWDER**.- (1) "Mixed masala powder" means the powder obtained from grinding clean and dried spices and herbs, including their extracts, which may contain ingredients such as edible starches, edible salt, dried fruits and vegetables or their products, edible vegetable oil and fats or their products, nuts and their products, cereals and pulses or their products, nutritive sweeteners or other ingredients suitable to the product.

(2) All the above ingredients shall either be standardised or permitted for use in the preparation of other standardised food under these regulations.

(3) The spices and herbs covered under ISO, Codex, Spices Board and Food Safety and Standards (Food or Health Supplements, Nutraceuticals, Foods for Special Dietary Uses, Foods for Special

Medical Purpose, Functional Foods and Novel Food) Regulations, 2016 may also be used, which shall be free from extraneous matter, mould growth, and insect infestation.

(4) It shall meet the following requirements, namely:-

Sr. No.	Characteristic	Requirement		
		(A)	(B)	(C)
(i)	Spice Content, per cent. by mass (*Minimum*)	85.0	40.0	25.0
(ii)	Moisture, per cent. by mass(*Maximum*)	12.0	12.0	12.0
(iii)	Volatile oil, per cent. volume by mass(on dry basis) (*Minimum*)	0.4	0.2	0.1
(iv)	Acid Insoluble Ash per cent by mass (on dry basis) (*Maximum*)	2.0	2.0	2.0

(5) The minimum percentage of "Spice Content"shall be mentioned on the label and the parameters and their limits specified against serial number (ii) to (iv) of the table in sub-clause (4) shall be applicable as per the minimum spice content specified therein.

(6) In addition, the name of the specific product such as chana masala, sambar Masala may also be mentioned and the salt content above 5 per cent shall be declared on the label.]

2.9.21: Aniseed (Saunf)

1. **Aniseed (Saunf) whole** means the dried and mature fruit of Pimpinella anisum L. It shall have characteristic aromatic flavour and shall be free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Shrivelled, immature, damaged / insect damaged / broken fruit	Not more than 5.0 percent by weight
(iii)	Moisture	Not more than 12.0 percent by weight
(iv)	Total ash on dry basis	Not more than 9.0 percent by weight
(v)	Ash insoluble in dilute HCl on dry basis	Not more than 1.5 percent by weight
(vi)	Volatile oil content on dry basis	Not less than 1.0 percent by v/w
(vii)	Insect damaged matter	Not more than 1.0 percent by weight
(viii)	Foreign edible seeds	Not more than 2.0 percent by weight

2.9.22: Ajowan (Bishops seed)

1**. Ajowan (Bishops seed**) means the dried ripe fruits (seeds) of Trachyspermum ammi. L Sprague. It shall have characteristic aromatic flavour and shall be free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and any other harmful substances.

It shall conform to the following standards:—

(i)	Moisture	Not more than 11.0 percent by weight
(ii)	Extraneous matter	Not more than 2.0 percent by weight
(iii)	Shrivelled / Damaged / insect damaged / broken fruit	Not more than 2.0 percent by weight
(iv)	Volatile oil content on dry basis	Not less than 1.5 percent v/w

2.9.23: Dried Mango Slices

1. **Dried Mango Slices--**Means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight.

It shall also conform to the following standards, namely :—

Moisture	Not more than 12 per cent by weight.
Damaged slices	Not more than 5 per cent by weight.
Seed Coatings	Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.

(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus, moisture or heating.

2.9.24 Dried Mango Powder (Amchur)

1. **Dried Mango Powder (Amchur)--**Means the powder obtained by grinding clean and dried mango slices having characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:—

(a)	Moisture	Not more than 12 per cent by Weight
(b)	Total ash (salt free basis)	Not more than 6 per cent by weight
(c)	Ash insoluble in dilute HCl	Not more than 1.5 per cent by weight
(d)	Crude fibre	Not more than 6 per cent by weight
(e)	Acidity as anhydrous tartaric acid	Not less than 12 per cent and not more than 26 percent by weight

[75][2.9.25: Pepper White

1. **Pepper White** whole means the dried berries of Piper nigrum L. from which the outer pericap is removed with or without preliminary soaking in water and subsequent drying, if necessary. The berries shall be light brown to white in colour with a smooth surface. The berries on grinding shall have characteristic aromatic flavour and shall be free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and any other harmful substances.

It shall conform to the following standards: —

(i) Extraneous matter	Not more than 0.8 percent by weight
(ii) Broken Berries	Not more than 3.0 percent by weight
(iii) Black berries	Not more than 5.0 percent by weight
(iv) Bulk Density (gm/litre)	Not less than 600 percent by weight
(v) Moisture	Not more than 13.0 percent by weight
(vi) Total ash on dry basis	Not more than 3.5 percent by weight
(vii) Non Volatile ether extract on dry basis	Not less than 6.5 percent by weight
(viii) Volatile oil content on dry basis	Not less than 1.0 percent by v/w
(ix) Peperine Content on dry basis	Not less than 4.0 percent by weight
(x) Insect damaged matter	Not more than 1.0 percent by weight

Explanation:- (a) Broken berries means berry that has been separated in two or more parts.

(b) Black Berry means berry of dark colour generally consisting of black pepper berry whose pericarp has not been fully removed.

2**. Pepper White powder** means the powder obtained by grinding dried berries of Piper nigrum L. from which the outer pericarp is removed and to which no foreign matter is added. It shall have characteristic aromatic flavour and shall be free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The powder shall be free from added colouring matter and any other harmful substances.

It shall conform to the following standards:—

(i) Moisture	Not more than 13.0 percent by weight
(ii) Total ash on dry basis	Not more than 3.5 percent by weight
(iii) Ash insoluble in dilute HCl on dry basis	Not more than 0.3 percent by weight
(iv) Crude fibre on dry basis	Not more than 6.5 percent by weight
(v) Non Volatile ether extract on dry basis	Not less than 6.5 percent by weight
(vi) Volatile oil content on dry basis	Not less than 0.7 percent by v/w
(vii) Peperine Content on dry basis	Not less than 4.0 percent by weight]

[Amendment for omission of this provision w.e.f. 1st February 2022]

2.9.26: Garlic (Lahsun)

1. **Dried (Dehydrated) Garlic (Lahsun)** means the product obtained by drying by any suitable method which ensures characteristics of fresh garlic on rehydration the cloves of Allium sativum L. without bleaching or precooking. It shall be white to pale cream in colour, free from scorched, toasted and baked particles. It may be whole, sliced, quarters, pieces, flakes, kibbled, granules or powdered. The product on rehydration shall have characteristic pungent of odour of garlic, free from off odour, mustiness fermentation and rancidity. It shall be free from mould, living and dead insects, insect fragments, rodent contamination and fungal infection. The products shall be free from added colouring matter and any other harmful substances. It shall be free from stalks, peels, stems, and extraneous matter. When in powdered form, it shall be free flowing and free from agglomerates.

The products may contain food additives permitted in these regulations including Appendix - A and it shall conform to the following standards, namely:—

(i)	Extraneous matter	Not more than 0.5 percent
(ii)	Moisture	
	a. In case of powdered Garlic	Not more than 5.0 percent by weight
	b. other than powdered Garlic	Not more than 8.0 percent by weight
(iii)	Total ash on dry basis	Not more than 5.0 percent by dry weight
(iv)	Ash insoluble in dil HCl	Not more than 0.5 percent by weight
(v)	Cold water soluble extract on dry basis	Not less than 70.0 and not more than 90.0 percent by weight
(vi)	Volatile organic sulphur compound on dry basis	Not less than 0.3 percent by weight
(vii)	Peroxidase test	Negative

2.9.27: Celery

1. Celery whole means the dried ripe fruits (seeds) of Apium graveoleans L. It shall be of uniform colour with characteristic aromatic flavour and shall be free from mustiness. It shall be free from mould, living and dead insects, insect fragments, rodent contamination. The product shall be free from added colouring matter and any other harmful substances.

It shall conform to the following standards:—

(i)	Extraneous matter	Not more than 2.0 percent by weight
(ii)	Moisture	Not more than 10.0 percent by weight

2.9.28: Dehydrated Onion (Sukha Pyaj)

1. **Dehydrated Onion (Sukha Pyaj) -** means the product obtained by removal of most moisture by any acceptable method which ensures characteristics of fresh onions on rehyderation, from sound bulbs of Allium cepa.L. free from mould, disease, outer skin, leaves and roots. The product may be whole or in the form of slices, rings, flakes, pieces, small grits or powder. The product may be white/cream/pink or red in colour, free from stalks, peals, stems and extraneous matters and scorched particles. The finished product shall be free from discolouration or enzymatic reaction. The product

on rehyderation shall be of characteristic flavour, free from foreign and off flavour, mustiness, fermentation and rancid flavour.

It shall be free from mould, living and dead insects, insect fragments and rodent contamination. The product shall be free from added colouring matter and any other harmful substances. When in powdered form, it shall be free flowing and free from agglomerates.

The products may contain food additives permitted in these regulations including Appendix - A and it shall conform to the following standards, namely:—

Extraneous matter	Not more than 0.5 percent by weight
Moisture:	
(a) In case of powdered onion	Not more than 5.0 percent by weight
(b) Other than powdered onion	Not more than 8.0 percent by weight
Total Ash on dry basis	Not more than 5.0 percent by weight
Ash insoluble in dil HCl	Not more than 0.5 percent by weight
Peroxidase	Negative

2.9.29 Asafoetida

ASAFOETIDA (Hing or Hingra) means the oleogumresin obtained from the rhizome and roots of Ferula alliaces, Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, ammoniaccum resin or any other foreign resin. Hing shall conform to the following standards, namely:

(1) Total ash content shall not exceed 15 per cent by weight.

(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight.

(3) The alcoholic extract (with 90 per cent alcohol) shall not be less than 12 per cent as estimated by the U.S.P. 1936 method.

(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards namely:—

(1) The total ash content shall not exceed 20 per cent by weight.

(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.

(3) The alcoholic extract (with 90 per cent alcohol) shall not be less than 50 per cent as estimated by the U.S.P. 1936 method.

(4) Starch shall not exceed 1 per cent by weight.

Compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, edible starches or edible cereal flour.

It shall not contain:—

(a) colophony resin,

(b) galbanum resin,

(c) ammoniaccum resin,

(d) any other foreign resin,

(e) coal tar dyes,

(f) mineral pigment,

(g) more than 10 per cent total ash content,

(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,

(i) less than 5 per cent alcoholic extract, (with 90 per cent of alcohol) as estimated by the U.S.P. 1936 method.

2.9.30 EDIBLE COMMON SALT:

1. **EDIBLE COMMON SALT** means a crystalline solid, white, pale, pink or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCl) and matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in the corresponding entry in column (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

Period of Validity	Minimum percentageof sodium chloridecontent as NaCl(on dry basis)	Maximum Percentageof matter solublein water other than sodium chloride (on dry basis)
Upto 31-3-1982	94.0	5.0
From 1-4-1982 to 31-3-1983	94.5	4.5
From 1-4-1983 to 31-3-1984	95.0	4.0
From 1-4-1984 to 31-3-1985	95.5	3.5
From 1-4-1985 onwards	96.0	3.0

The product may contain food additives permitted in these regulations including Appendix A. The total matter insoluble in water where an anticaking agent has been added shall not exceed 2.2 percent and sodium chloride content on dry basis shall not be less than 97.0 percent by weight.

2. **[70][****]**

3. **[70][****]**

4. **POTASSIUM IODATE** means a crystalline powder, white in colour free from impurities. It shall confirm to the following standards namely: —

1.	Potassium Iodate (as KIO_3) percent by weight	Not less than 99.0
2.	Solubility	Soluble in '30 Parts of water
3.	Iodine (as I) per cent by wt. not more than	0.002
4.	Sulphate (as SO4) per cent by wt. not more than	0.02
5.	Bromate, bromide, chlorate & chloride percent by wt. not more than	0.01
6.	Matter insoluble in water percent by wt. not more than	0.10
7.	Loss on drying percent by wt. not more than	0.1
8.	PH (5 percent solution)	Neutral
9.	Heavy metal (as Pb) ppm not more than	10

10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10

5. **Iron Fortified Iodized Salt (double fortified salt**) means a crushed Crystalline Solid; white or pale or pink pr light grey in colour, free from contamination with clay and other extraneous adulterants and impurities. Salt used for manufacture of double fortified salt shall have minimum 99.0 percent sodium chloride content on dry weight basis [4][when ferrous sulphate is used for fortification; minimum 98 per cent sodium chloride content on dry weight basis when ferrous fumarate in encapsulated form is used for fortification] and moisture not more than 1.5 percent and it shall conform to the following standards namely:—

Moisture	Not more than 1.5 per cent by weight
Water insoluble matter	Not more than 1.0% on dry weight basis.
Chloride content (as NaCl)	Not less than 97.0% on dry weight basis
Matter insoluble in dilute HCl	Not more than 0.30 % on dry weight basis
Matter soluble in water other than Nacl	Not more than 2.5% on dry weight basis
[70][****]	
[4][Phosphorous as P_2O_5	Not more than 3100 parts per million]
Sulphate as (SO4)	Not more than 1.1% by weight.
Magnesium as (Mg) water soluble	Not more than 0.10% by weight

[44] [omitted]

[4][Provided that double fortified salt may contain food additives permitted in Appendix A and Hydroxy Propyl Methyl Cellulose, Titanium dioxide, fully Hydrogenated Soyabean oil and Sodium hexametaphosphate (all food grades) at concentration of not more than GMP and anti –caking agent not more than 2.0 per cent on dry weight basis, and the water insoluble matter wherein anti-caking is used shall not exceed 2.2 percent.]

[30][**6. Salt Substitutes.-** (1) The composition of salt substitutes shall be as follows:

(a)	Potassium sulphate, potassium, calcium or ammonium salts of adipic, glutamic, carbonic, succinic, lactic, tartaric, citric, acetic, hydro- chloric or ortho phosphoric acids, and/or	GMP, except that Phosphorus not to exceed 4 per cent. m/m and NH_4^+ 3 per cent. m/m of the salt substitute mixture
(b)	Magnesium salts of adipic, glutamic, carbonic, citric, succinic, acetic, tartaric, lactic, hydro- chloric or orthophosphoric acids, mixed with other Mg-free salt substitutes as listed in 6.(1)(a), 6.(1)(c) and 6.(1)(d), and/or	$Mg^{++}$to be not more than 20 per cent. m/m of the total of the cations K^+, $Ca^{++}$and NH_4^+ present in the salt substitute mixture and Phosphorus not to exceed 4 per cent. m/m of the salt substitute mixture
(c)	Choline salts of acetic, carbonic, lactic, tartaric, citric or	The choline content

	hydrochloric acids, mixed with other choline-free salt substitutes as listed in 6.(1) (a), 6.(1)(b) and 6.(1)(d), and/or	not to exceed 3 per cent. m/m of the salt substitute mixture
(d)	Free adipic, glutamic, citric, lactic or malic acids	GMP

(2) Salt substitutes may contain:

(a) Colloidal silica or calcium silicate: not more than one per cent. m/m of the salt substitute mixture, individually or in combination.

(b) Diluents: safe and suitable nutritive foods as normally consumed namely, sugars, cereal flour.

(3) The addition of iodine-containing compounds to salt substitutes shall be as per the Foods Safety and Standards Regulations, 2011.

(4) The sodium content of salt substitutes shall be not more than 120 mg/100 g of the salt substitute mixture.

(5) Salt substitutes shall conform to the following specific provisions for the labelling in addition to the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, namely:-

(a) a declaration on the label as “low sodium salt substitute” or “low sodium dietetic salt";

(b) a declaration on the label regarding the amount of cations (that is, sodium, potassium, calcium, magnesium, ammonium and choline/100 g (m/m) in the salt substitute mixture.]

[32][2.9.31 SEASONING

1. Description: (a) Seasoning is intended to enhance flavour.

(b) It may contain ingredients such as spices, condiments and herbs including their extracts, salt, fruits and vegetables or their products or extracts, dry fruits, nuts and raisins or their products, edible starches, yeast and its product including yeast extract, soya and its products, hydrolyzed protein or their products, meat, poultry ,marine, aquatic and their products, edible vegetable oils and fats, cereal and cereal products, milk and milk products, nutritive sweeteners or any other suitable ingredient whose standards are prescribed in Food Safety and Standards(Food Product Standards and Food Additives) Regulations, 2011

(c) The ingredients referred to in clause (b) shall conform to the standards, wherever prescribed under these regulations.

(d) The product shall also conform to the following requirements, namely:-

Sr. No.	Characteristic	Requirement
1.	*Moisture % (by weight) (Maximum)	10.0

2.	Acid Insoluble Ash in dilute HCl % (on dry basis) (Maximum)	2.0

*Does not apply to seasonings such as paste of tomato, ginger, garlic, chili, etc., Seasoning may be added directly or packed separately with the product.

2. Food additives:

The product may contain food additives permitted in Appendix A.

3. Contaminants, toxins and residues:

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

4. Hygiene:

(a) The products shall be prepared and handled in accordance with the guidance provided in the Schedule 4 of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and any other such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006 (34 of 2006).

(b) The product shall conform to the microbiological requirement given in Appendix B.

5. Labelling:

The product covered by this standard shall be labelled in accordance with the Food Safety and Standards (Packaging and Labelling) Regulation, 2011.

6. **Method of analysis:**

The product shall be analysed as provided in the relevant Food Safety and Standards Authority of India Manual of Method of Analysis of Food.]

[66]**[2.9.32 SPICE OLEORESINS**.- (1) "Spice Oleoresins" means the volatile and non-volatile constituents of spices or herbs, which shall be obtained by extraction of the spice or herb with permitted food grade solvents, either singly or in combination, followed by separation of solvents and volatile portion.

(2) The non-volatile portion after separation of the solvent shall be added back to the volatile portion.

(3) The list of permitted food grade solvents and their residual limits are specified in the Table given below:

Sr. No.	Solvent	Limit (*Maximum*, in ppm)
(i)	Acetone	30
(ii)	Ethyl acetate	50
(iii)	n-Hexane	25
(iv)	Isopropyl alcohol	30

(v)	Methyl alcohol	50
(vi)	Carbon dioxide	GMP
(vii)	Water	GMP
(viii)	Diethyl ether	2
(ix)	Ethyl alcohol	GMP
(x)	Butan-1-ol (Butyl alcohol)	2
(xi)	Butan-2-ol	2
(xii)	Propan-1-ol (Propyl alcohol)	1
(xiii)	Methyl tert-butyl ether	2

(4) Spice Oleoresin shall meet the requirements as specified in the Table given below:

Sr. No.	Spice Oleoresin	Botanical name of spice or herb	Active component	Volatile Oil Content (VOC in ml/100g of oleoresin) (Not less than)
(i)	Ajowan (Bishop's weed)	*Trachyspermum ammi* L.	Thymol	1.5
(ii)	Allspice	*Pimentadioica (L)* Merr.	Eugenol	20.0
(iii)	Anisoon (Aniseed)	*Pimpinellaanisum*L.	Anethole and fenchone	9.0
(iv)	Sweet Basil (Niazbo)	*Ocimumbasilicum*L.	E-Beta-CaryoPhyllene (BCP)	4.0
(v)	Lal Mirchi[1] (Chilli) or Capsicum	*Capsicum frutescens L.* or *Capsicum annum L.*	Capsaicin	-
(vi)	Siahjira (Caraway)	*Carumcarvi*L.	Carvone, Carveol and Hydrocarvone	10.0
(vii)	ChhotiElaichi (Cardamom Small)	*Elettariacardamomum* Maton	1,8-cineole and α-terpinyl acetate	10.0
(viii)	Ajmoda (Celery)	*Apiumgraveolens* L.	d- limonene and sedanolides	7.0
(ix)	Dalchini (Cinnamon Bark)	Cinnamomumzeylanicum	Cinnamaldehyde	2.0
(x)	Laung (Clove)	*Syzygiumaromaticum (L)* Merr. & Perry	Eugenol	12.0

(xi)	Dhania (Coriander)	*Coriandrumsativum* L.	Linalool	1.0
(xii)	SafedZeera (Cumin)	*Cuminumcyminum* L.	Cuminaldehyde	10.0
(xiii)	Shatpushp, Sowa (Dillseed)	*Anethumgraveolens* L. or *Anethumsowa*Roxb. ex Fleming	Apiole and dillapiole	10.0
(xiv)	Saunf (Fennel)	*Foeniculumvulgare*Mill.	Anethole	3.0
(xv)	Adrak (Ginger)	*Zingiberofficinale*Rosc.	Gingerol	10.0
(xvi)	Habbulgar (Laurel Leaf / Bay Leaf)	*Laurusnobilis*L.	1,8-cineole, linalool, α-terpinyl acetate and methyl eugenol	5.0
(xvii)	Jaipatri (Mace)	*Myristicafragrans*Houtt.	Sabinene and Pinenes	10.0
(xviii)	Marjoram Sweet	*Marjoranahortensis*Moench.	Pinenes, Ethereal oil	8.0
(xix)	Jaiphal (Nutmeg)	*Myristicafragrans*Houtt.	Sabinene and Pinenes	10.0
(xx)	Marua-Jangli/ Marubak (Oregano)	*Origanumvulgare*L.	Carvacrol, Thymol, Eugenol, Rosmarinicacid	20.0
(xxi)	Paprika[2]	*Capsicum annuum L.*	Capsaicin	-
(xxii)	Parsley Leaf	*Petroselinumcrispum* Mill.	Myristicin and Apiole	2.0
(xxiii)	Parsley Seed	*Petroselinumcrispum* Mill.	Myristicin and Apiole	2.0
(xxiv)	Rosemary	*Rosmarinusofficinalis* L.	Carnosic acid and Carnosol	2.0
(xxv)	Chakra Phool (Star Anise)	*Illiciumverum*Hook.	Anethole	9.0
(xxvi)	Thyme	*Thymus vulgaris* L.	Thymol	5.0
(xxvii)	Kalimirch (Black Pepper)/ Safedmirch (White Pepper)	*Piper nigrum*L.	Piperine	10.0
(xxviii)	Haldi (Turmeric)	*Curcuma longa* L.	Curcuminoid Content, percent by mass, on dry basis (*Minimum*)- 3.5	

[1]Color Value (expressed as Nesselerimetric units): 4000 – 20,000

[1]Scoville Heat Units, *Min*: 240000

[2]Color Value in ASTA Color Units (CU):250 -5000

Note: The name of active component and the volatile oil shall be declared on the label.

2.9.33 TEJPAT.-(1)"Tejpat" means the dried leaves of the tree *Cinnamomumtamala*, Nees and Ebermof family *lauraceae*, which shall have characteristic aroma and shall be clean and free from musty odour, off-flavor, mould growth, insect infestation, rodent contamination and other impurities except to the extent as per the requirements given below.

(2) It shall be free from admixture of leaves other than Tejpat.

(3) It shall conform to the following requirements, namely:-

S.No	Characteristics	Requirements
(i)	Moisture content, per cent. by mass, on dry basis(*Maximum*)	10.0
(ii)	Extraneous matter, per cent. by mass, on dry basis (*Maximum*)	1.0
(iii)	Shrivelled and discoloured leaves, per cent. by mass, on dry basis(*Maximum*)	10.0
(iv)	Cut and broken leaves, per cent. by mass, on dry basis(*Maximum*)	20.0
(v)	Insect bored and diseased leaves, per cent. by mass, on dry basis(*Maximum*)	10.0
(vi)	Twigs, leafstalk, per cent. by mass, on dry basis (*Maximum*)	5.0
(vii)	Volatile oil content, (ml/100g) on dry basis (*Minimum*)	0.5
(viii)	Uric acid, mg/kg, on dry basis (*Maximum*)	100.0

Explanation.- For the purpose of this sub-regulation,-

(a) "extraneous matter" means stones, dust, other dirt and all organic and vegetable maters not of Tejpat origin;
(b) "shrivelled and discoloured leaves" means leaves that are discoloured or not properly developed which materially affect the quality, shrivelled leaves do not include small and tender leaves;
(c) "insect board and diseased leaves" that are partly or wholly bored or eaten by insects or diseased;
(d) "twigs and leaf stalk" means small branches and stalks attached with the tejpat leaves.

2.9.34 STAR ANISE.- (1) "Star Anise" means the dried mature fruit of the tree *Illiciumverum* Hook. of the family *Illiaceae,* which shall comprise of boat-shaped follicles arranged radially around a central stalk.

(2) The colour of star anise shall be brownish red or reddish brown and shall have a characteristic odour and an aromatic, sweet and anise-like flavour.

(3) It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

(4) It shall conform to the following requirements, namely:-

S. No	Characteristics	Requirements
(i)	Extraneous matter, per cent. by mass on dry basis(*Maximum*)	1.0
(ii)	Stalks, per cent. by mass on dry basis(*Maximum*)	3.0
(iii)	Broken and abnormal fruits, per cent. by mass on dry basis(*Maximum*)	25.0
(iv)	Moisture content, per cent. by mass on dry basis(*Maximum*)	10.0
(v)	Acid insoluble ash, per cent. by mass on dry basis (*Maximum*)	1.0
(vi)	Volatile oil, per cent. (ml/100 g) on dry basis (*Minimum*)	8.0

Explanation.- For the purposes of this sub-regulation.-

(a) "extraneous matter" means all that does not belong to the star anise fruit and all other extraneous matter of animal, vegetable or mineral origin;

(b) "broken fruits" are those which contain fewer than five follicles;

(c) "abnormal or undeveloped fruits" are those containing three or more under-developed follicles.]

[59][2.9.35 Dried Oregano

(1) Dried Oregano Whole means the leaves of the Origanum genus, species and sub-species, excluding Origanum majorana, belonging to the Lamiaceae (Labiatae) family. The colour of the dried leaves shall be light greyish green to olive green. It shall be free from yellow or brown leaf, and from dust and fine particles. It shall have characteristic odour and flavour. It shall be free from mustiness and other foreign flavours. It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

It shall conform to the following requirements:

Sl. No.	**Characteristics**	**Requirements**

1.	Moisture content, percent by mass (Maximum)	12.0
2.	Extraneous vegetable matter, percent by mass, (Maximum)	3.0
3.	Foreign Matter, percent by mass, on dry basis (Maximum)	0.2
4.	Acid-insoluble ash, percent by mass on dry basis (Maximum)	2.0
5.	Volatile oil content, ml/100g, on dry basis (Minimum)	1.8

Explanation- (i) **Extraneous Vegetable Matter** - Vegetative matter associated with the plant from which the product originates.

(ii) **Foreign matter** means any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, and any other material.

(2) Dried Oregano Powder means the powder obtained by grinding leaves of the *Origanum* genus, species and sub-species, excluding *Origanum majorana*, belonging to the *Lamiaceae (Labiatae)* family. It shall have characteristic odour and flavour. It shall be free from mustiness and other foreign flavours. It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

It shall also conform to the following requirements, namely:-

Sl. No.	**Characteristics**	**Requirements**
1.	Moisture content, percent by mass (*Maximum*)	12.0
2.	Acid insoluble ash, percent by mass on dry basis (*Maximum*)	2.0
3.	Volatile oil content, ml/100g, on dry basis (*Minimum*)	1.5

2.9.36 Pimento or Allspice

(1) Pimento or Allspice Whole means the dried, whole berry of *Pimenta dioica* (L.)Merr. It shall be dark brown in colour. It shall have a mixed flavour of four spices - clove, cinnamon, nutmeg and pepper. It shall be free from any foreign taste or odour, including rancidity or mustiness. It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

It shall conform to the following requirements, namely:-

Sl. No.	**Characteristics**	**Requirements**

1.	Moisture content, percent by mass (*Maximum*)	12.0
2.	Extraneous vegetable matter, percent by mass, (*Maximum*)	1.0
3.	Broken berries, percent by mass, on dry basis (*Maximum*)	2.0
4.	Foreign matter, percent by mass, on dry basis (*Maximum*)	0.2
5.	Acid-insoluble ash, percent by mass on dry basis, (*Maximum*)	1.0
6.	Volatile oil content, ml/100g, on dry basis (*Minimum*)	2.0

Explanation .- (i) Extraneous Vegetable Matter - Vegetative matter associated with the plant from which the product originates.

(ii) **Foreign matter** means any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, and any other material.

(2) Pimento or Allspice Powder means the powder obtained by grinding dried berries of *Pimenta dioica* (L.) Merr. It shall be in the form of homogeneous dark brown powder. It shall have a mixed flavour of four spices – clove, cinnamon, nutmeg and pepper. It shall be free from any foreign taste or odour, including rancidity or mustiness. It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

It shall conform to the following requirements, namely:-

Sr. No.	**Characteristics**	**Requirements**
1.	Moisture content, percent by mass (*Maximum*)	12.0
2.	Acid insoluble ash, percent by mass, on dry basis (*Maximum*)	1.0
3.	Volatile oil content, ml/100g, on dry basis (*Minimum*)	1.0
4.	Non-volatile ether extract, percent by mass, on dry basis (*Maximum*)	8.5
5.	Crude fibre, percent by mass, on dry basis (*Maximum*)	27.5

2.9.37 Dried Laurel or Dried Bay Leaf -

(1) Dried Laurel or Dried Bay Leaf Whole means the dried leaf of the tree *Laurus nobilis* L. The laurel leaf is oblong and pointed at the tip with a short petiole. The leaf is soft, shiny on the surface

and dull underneath. It shall have pleasant, strong and delicate odour which emanates strongly when the leaf is crushed. It shall have characteristic flavour. It shall be free from any extraneous odour; in particular mustiness. It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

It shall conform to the following requirements, namely:-

Sr. No.	Characteristics	Requirements
1.	Moisture content, percent by mass (*Maximum*)	8.0
2.	Extraneous vegetable matter, percent by mass, on dry basis (*Maximum*)	2.0
3.	Foreign Matter, percent by mass, on dry basis (*Maximum*)	0.2
4.	Acid-insoluble ash, percent by mass on dry basis (*Maximum*)	2.0
5.	Volatile oil content, ml/100 g, on dry basis, (*Minimum*)	1.0

Explanation.- (i) Extraneous Vegetable Matter - Vegetative matter associated with the plant from which the product originates.

(ii) **Foreign matter** means any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, and other foreign matters.

(2) Dried Laurel or Dried Bay Leaf Powder means the powder obtained by grinding dried leaf of the tree *Laurus nobilis* L. It shall have pleasant, strong and delicate odour which emanates strongly when the leaf is crushed. It shall have characteristic flavour. It shall be free from any extraneous odour, in particular mustiness. It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

It shall conform to the following requirements, namely:-

Sr. No.	Characteristics	Requirements
1.	Moisture content, percent by mass (*Maximum*)	8.0
2.	Acid insoluble ash, percent by mass, on dry basis (*Maximum*)	2.0
3.	Volatile oil content, ml/100g, on dry basis, (*Minimum*)	0.8
4.	Crude fibre content, percent by mass, on dry basis (*Maximum*)	30.0

2.9.38 Dried Mint

Dried mint means dried leaves or broken or crushed leaves of *Mentha spicata* Linnaeus syn. /*Mentha viridis* Linnaeus. It shall have characteristic odour and flavour and shall be free from mustiness and

other foreign flavours. It shall be free from living insects and moulds and shall be free from dead insects, insect fragments and rodent contamination visible to the naked eye.

It shall conform to the following requirements, namely:-

Sr. No.	Characteristics	Requirements
1.	Moisture content, percent by mass (*Maximum*)	13.0
2.	Foreign matter, percent by mass, (*Maximum*)	1.0
3.	Extraneous vegetable matter percent by mass (*Maximum*)	3.0
4.	Total ash percent by mass on dry basis (*Maximum*)	12.0
5.	Acid-insoluble ash, percent by mass on dry basis (*Maximum*)	2.5
6.	Volatile oil content, ml/100g, on dry basis (*Minimum*)	0.5

Explanation.-(i**) Foreign Matter** means any matter or material not usually associated with the product.

(ii) Extraneous vegetable matter means any vegetative matter associated with the plant from which the product originates.

2.9.39 Dried Rosemary.-Dried rosemary means dried leaves of the species *Rosmarinus officinalis L.*, belonging to the family *Lamiaceae*. It shall have characteristic colour, odour and flavour. It shall be free from any foreign taste or odour, including rancidity or mustiness. It shall be free from living and dead insects, moulds, insect fragments and rodent contamination visible to the naked eye.

It shall conform to the following requirements, namely:-

Sr. No.	Characteristics	Requirements
i.	Moisture content, percent by mass (*Maximum*)	11.0
ii.	Foreign matter, percent by mass (*Maximum*)	1.0
iii.	Extraneous vegetable matter, percent by mass (*Maximum*)	3.0
iv.	Brown leaves, percent by mass, on dry basis (*Maximum*)	10.0
v.	Total Ash, percent by mass on dry basis, (*Maximum*)	8.0
vi.	Acid-insoluble ash, percent by mass on dry basis, (*Maximum*)	1.0
vii.	Volatile oil content, ml/100g, on dry basis (*Minimum*)	0.8

Explanation.- (i) Foreign matter means any matter or material not usually associated with the product.

(ii) **Extraneous vegetable matter** means any vegetative matter associated with the plant from which the product originates.

(iii) **Brown leaves** means the leaves of plant which die during growing season and are brown in colour.]

[73][**2.9.40 DRIED THYME.-** (1) Dried thyme is the product prepared from leaves/ flowers of *Thymus* spp. of lamiaceae family. Dried thyme shall have a characteristic odour and flavour of volatile oil (such as thymol, carvacrol, and linalool), which can vary depending on geoclimatic factors/conditions. Dried thyme shall be free from any foreign odour or flavour and especially from mustiness. Dried thyme shall have a characteristic colour varying from green ash to brownish grey. It shall be free from living insects.

(2) It may be presented in following styles:

(a) Whole or intact.

(b) Crushed or rubbed: processed into varying degrees ranging from a coarse to fine crush.

(c) Ground: processed into powders.

(3) It shall conform to the following requirements, namely:-

TABLE

S. No.	Requirements	Limits
1.	Moisture content, percent by mass (maximum)	12.0
2.	Extraneous vegetable matter, percent by mass, (maximum)	0.5
3.	Foreign matter, percent by mass, (maximum)	0.5
4.	Insect damaged leaves/ flowers, percent by mass, (maximum)	1.0
5.	Dead insects, Insect fragments and rodent contaminant, percent by mass, (maximum)	1.0
6.	Animal excreta (mg/kg) , (maximum)	1.0
7.	Stalk exceeding 10 mm in length or 2 mm in diameter percent by mass, (maximum)	5.0
8.	Total Ash, percent by mass on dry basis, (maximum)	12.0
9.	Acid-insoluble ash, percent by mass on dry basis, (maximum)	3.5
10.	Volatile oil content, ml/100g, on dry basis (minimum)	1.0
11.	Uric Acid , mg/kg on dry basis (maximum)	100

Explanations.- For the purpose of this regulation**,-**

(i) **Extraneous vegetable matter.-** Vegetative matter associated with the plant from which the product originates - but is not accepted as part of the final product.

(ii) **Foreign matter.-** Any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, burlap bagging, metal etc.

(iii) **Stalk.-** The proportion of stalks which have dimensions exceeding 10 mm in length or 2 mm in diameter.]

Amendment for insertion of new provision

[75]**[2.9.41 DRIED SAGE. -** (1) Dried sage in form of whole or cut leaves means the leaves of the species *Salvia officinalis* L., belonging to the family Lamiaceae, collected before flowering then dried. Dried sage shall have a typical, strong and aromatic odour. It shall have characteristic flavour which is very aromatic, pleasant, fresh and slightly bitter.

(2)Dried sage as whole or cut leaves shall be free from living insects, and shall be free from moulds, dead insects, insect fragments and rodent contamination visible to the naked eye.

(3) It shall conform to the following requirements, namely:-

Sr.No.	Requirements	Limit
(1)	Moisture content, percent by mass (*Maximum*)	12.0
(2)	Total Ash, percent by mass on dry basis, (Maximum)	12.0
(3)	Acid-insoluble ash, percent by mass on dry basis, (*Maximum*)	2.0
(4)	Volatile oil content, ml/100g, on dry basis (*Minimum*)	1.5
(5)	Extraneous matter, percent m/m, (*Maximum*)	1.0
(6)	Broken stalk/stem, percent m/m, (Maximum)	3.0
(7)	Brown leaves, percent m/m, (Maximum)	5.0

Explanations: for the purpose of this clause,

a) **Extraneous vegetable matter:** Vegetative matter associated with the plant from which the product originates - but is not accepted as part of the final product.
b) **Foreign matter:** Any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, burlap bagging, metal etc".
c) **Stalk:** The proportion of stalks which have dimensions exceeding 10 mm in length or 2 mm in diameter

(4) ***{**The product shall be labelled in accordance with the Food Safety and Standards (Labelling and Display) Regulation, 2020. In addition, the styles of the product shall also be mentioned on the label.}]

*[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022; *FBOs to comply with the provisions by 1st July 2022 vide vide Direction: F.No. REG/L&D-Extension/FSSAI-2021 dated 22nd October, 2021]*

Amendment for insertion of new provision

[77][2.9.42 Dried Sweet Basil Leaves:

1. Dried sweet basil leaves are obtained from the species *Ocimumbasilicum* L., belonging to the family Lamiaceae. Dried sweet basil leaves shall have characteristic colour, odour and flavour. It shall be free from visible moulds, living/dead insects, insect fragments and rodent contamination. The product shall be free from foreign odours, flavours, any other harmful substances and added colouring matters. It shall conform to the following requirements:

Sr. No.	Requirements	Limit
1.	Moisture content, per cent by mass (*Maximum*)	12.0
2.	Total Ash, per cent by mass on dry basis, (Maximum)	16.0
3.	Acid-insoluble ash, per cent by mass on dry basis, (*Maximum*)	2.0
4.	Volatile oil content, ml/100g, on dry basis (*Minimum*)	0.3
5.	Foreign matter, per cent m/m, (*Maximum*)	1.0
6.	Extraneous vegetable matter, per cent m/m, (Maximum)	3.0
7.	Yellow or Brown leaves, per cent m/m, (Maximum)	5.0

2. **Explanations:** for the purpose of this clause: -

(1) Foreign matter: Any visible objectionable matter or material not usually associated with the natural components of the spice plant such as sticks, stones, burlap bagging, metal etc.

(2) Extraneous vegetable matter: Vegetative matter associated with the plant from which the product originates, but is not accepted as part of the final product.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

2.10: BEVERAGES, (Other than Dairy and Fruits & Vegetables based)

2.10.1: TEA

1. **TEA** means tea other than Kangra tea obtained by acceptable processes, exclusively from the leaves, buds and tender stems of plant of the Camellia sinensis (L) O. Kuntze. It may be in the form of black or oolong tea. The product shall have characteristic flavour free from any off odour, taint and mustiness. It shall be free from living insects, moulds, dead insects, insect fragments and rodent contamination visible to the naked eye (corrected if necessary for abnormal vision). The product shall be free from extraneous matter, added colouring matter and harmful substances:

Provided that the tea may contain "natural flavours" and "natural flavouring substances" which are flavour preparations and single substance respectively, acceptable for human consumption,

obtained exclusively by physical processes from materials of plants origin either in their natural state or after processing for human consumption in packaged tea only. Tea containing added flavour shall bear proper label declaration as provided in regulation 2.4.5 (23) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011. Tea used in the manufacture of flavoured tea shall conform to the standards of tea. The flavoured tea manufacturers shall register themselves with the Tea Board before marketing flavoured tea. Pectinase enzyme can be added up to a level of 0.2% during manufacture as processing aid. The product shall conform to the following requirement in which all the figures given are expressed on the basis of the material oven-dried at 103±2° C.

(a)	Total Ash (m/m)	Not less than 4.0 percent and not more than 8.0
(b)	Water Soluble Ash	Not less than 45.0 percent of total ash
(c)	Alkalinity of water soluble ash expressed as KOH (m/m)	Not less than 1.0 percent and not more than 3.0 percent
(d)	Acid-insoluble ash (m/m)	Not more than 1.0 percent
(e)	Water extract (m/m)	Not less than 32.0 percent
(f)	Crude Fibre (m/m)	Not more than 16.5 percent
[25][(g)	Iron filing (mg/Kg)	Not more than 250]

2. KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinensis or Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications namely;

(a)	Total ash determined on tea dried to constant weight at 100^0C	4.5 to 9.0 Per cent. By weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 percent of total ash
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.2 per cent. By weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant at 180^0C) with 100 parts of distilled water for one hour under reflux	Not less than 1.2 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent. And not more than 2.2 per cent. Expressed as K_2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100^0C	Not more than 18.5 per cent.
[25][(g)	Iron Filing (mg/Kg)	Not more than 250]

It shall not contain any added colouring matter It may also contain 0.2 per cent Pectinase enzyme

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusivley by physical process from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as

provided in regulation 2.4.5 (23) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not, the standards or quality of tea prescribed in item regulation 2.10.1 (1) shall apply.

Provided also that Flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured tea;

3. Green Tea means the product derived solely and exclusively, and produced by acceptable processes, notably enzyme, inactivation, rolling or comminution and drying, from the leaves, buds and tender stems of varieties of the species Camellia sinensis (L) O. Kuntze, known to be suitable for making tea for consumption as a beverage. The product shall have characteristic flavour free from any off odour, taint and mustiness. It shall be free from living or dead insects, moulds, insect fragments and rodent contamination visible to the naked eye (corrected if necessary for abnormal vision). The product shall be free from extraneous matter, added colouring matter and harmful substances;

Provided that the tea may contain "natural flavours" and "natural flavouring substances" which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processes from material of plants origin either in their natural state or after processing for human consumption in packaged tea only. Tea containing added flavour shall bear proper label declaration as provided in regulation 2.4.5 (23) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011. Tea used in the manufacture of flavoured tea shall conform to the standards of tea. The flavoured tea manufacturers shall register themselves with the Tea Board before marketing flavoured tea. The product shall conform to the following requirements in which all the figures given are expressed on the basis of the material oven-dried at 103±2° C.

	Parameter	*Limits*
(a)	Total Ash (m/m)	Not less than 4.0 percent and not more than 8.0 percent
(b)	Water-soluble ash	Not less than 45.0 percent of total ash.
(c)	Alkalinity of water – soluble Ash expressed as KOH (m/m)	Not less than 1.0 percent of total ash and not more than 3.0 percent
(d)	Acid-insoluble ash (m/m)	Not more than 1.0 percent
(e)	Water-extract (m/m)	Not less than 32.0 percent
(f)	Crude fibre (m/m)	Not more than 16.5 percent
(g)	Total catechins (m/m)	Not less than 9.0 percent and not more than 19.0 percent

Amendment for insertion of new provision

[75]**[4. Instant Tea in Solid Form. -** (1) Dried water- dispersible solids obtained by aqueous extraction by an acceptable process of the leaves, buds, and stems, and of materials derived there from, of those varieties of the species Camellia sinensis (Linnaeus) O. Kuntze exclusively which

are known to be suitable for making tea for consumption as a beverage and the residue, if any, of permitted process aids and permitted food additives.

(2) The instant tea in solid form shall produce a liquor of characteristic flavour, colour and taste. It shall have no taint and shall be free from extraneous matter, added colours and non-permitted flavours.

(3) It may contain processing aids as permitted for Tea and for all foods under APPENDIX C of these regulations.

(4) Instant tea used in the manufacture of flavoured instant tea shall conform to the standards of instant tea.

(5) The flavoured instant tea manufacturers shall register themselves with the Tea Board before marketing flavoured instant tea and the registration number shall be mentioned on the label.

(6) The product shall conform to the following requirements, in which all the figures given are expressed on the basis of the material oven-dried at 103±2° C.

S. No.	Parameters	Requirements
1.	Moisture content, percent by mass, Max	6.0
2.	Total ash, percent by mass, Max, on dry basis: a) Hot Soluble b) Cold Soluble	 20 35
3.	Acid-insoluble ash, percent by mass, Max	1.0]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

2.10.2: COFFEE

1. Coffee (green raw or unroasted) means the dried seeds of Coffea arabica, Coffea liberica, Coffee excelsa or Coffea canephora (robusta) with their husks (mesocarp and endocarp) removed.

1.1 Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

1.2. Ground coffee means the powdered products obtained from 'roasted coffee' only and shall be free from
husk.

1.3. Coffee (green raw or unroasted), 'roasted and ground coffee' shall be free from any artificial colouring, flavouring, facing extraneous matter or glazing substance and shall be in sound, dry and fresh condition, free from rancid or obnoxious flavour.

1.4. Roasted coffee and ground coffee shall conform to the following analytical standards:-

Moisture (on dry basis) m/m	Not more than 5.0 percent
Total Ash (on dry basis) m/m	3.0 to 6.0 percent
Acid insoluble ash (on dry basis) m/m	Not more than 0.1 percent

Water soluble ash (on dry basis) m/m	Not less than 65 percent of total ash
Alkalinity of soluble ash in milliliters of 0.1 N hydrochloric acid per gram of material (on dry basis) m/m	Not less than 3.5 ml & Not more than 5.0 ml
Aqueous extracts on dry basis m/m percent	Not less than 26.0 and not more than 35.0
Caffeine (anhydrous) (on dry basis) m/m	Not less than 1.0 percent

[61][1A. Decaffeinated roasted and ground coffee

1A.1 Decaffeinated Coffee means, the dried seeds of Coffea arabica, Coffea liberica, Coffea excelsa or Coffea canephora (Robusta) or with their husks (mesocarp and endocarp) removed and decaffeinated to remove nearly all the caffeine from the beans. Decaffeination is carried out while the beans are in green form, before they are roasted.

1A.2 Roasted decaffeinated coffee means properly cleaned green coffee which has been decaffeinated, roasted to a brown colour and has developed its characteristic aroma.

1A.3 Ground decaffeinated coffee means the powdered products obtained from 'roasted decaffeinated coffee' only and shall be free from husk.

1A.4 It shall be free from artificial colouring, flavouring, facing, extraneous matter or glazing substances and shall be in dry and fresh condition, free from rancid or obnoxious flavours. It shall conform to the following standards on dry weight basis, namely: -

(i)	Moisture, percent by mass, max	5.0
(ii)	Total Ash, percent by mass	3.0 to 6.0
(iii)	Acid insoluble ash, percent by mass, max	0.1
(iv)	Water soluble ash, percent by mass, min	65.0
(v)	Alkalinity of soluble ash in ml of 0.1 N hydrochloric acid per gram of material, percent by mass, ml	3.5 to 5.0
(vi)	Aqueous extracts, percent by mass	26.0 to 35.0
(vii)	Caffeine (anhydrous) percent by mass, max	0.1]

2. Soluble Coffee Powder means coffee powder, obtained from freshly roasted and ground pure coffee beans. The product shall be in the form of a free flowing powder or shall be in the agglomerated form (granules) having colour, taste and flavour characteristic of coffee. It shall be free from impurities and shall not contain chicory or any other added substances.

It shall conform to the following standards:

(i)	Moisture (on dry basis) m/m	Not more than 4.0 percent
(ii)	Total ash (on dry basis) m/m	Not more than 12.0 percent

(iii)	Caffeined content (on dry basis) m/m	Not less than 2.8 percent
(iv)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring
(v)	Solubilty in cold water at 16±2oC	Soluble with moderate stirring in 3 minutes

[61] [2A. **Decaffeinated soluble coffee powder**

2A.1 Decaffeinated soluble coffee powder means coffee powder obtained from freshly roasted and ground pure coffee beans from which most of the caffeine has been removed. The product shall be in the form of a free flowing powder or shall be in the agglomerated form (granules) having colour, taste and flavour characteristic of coffee. It shall be free from impurities and shall not contain chicory or any other added substances.

2A.2 Decaffeinated Soluble Coffee powder or granules shall conform to the following standards on dry weight basis, namely: -

(i)	Moisture, percent by mass, Max	4.0
(ii)	Total Ash percent by mass, Max	12.0
(iii)	Caffeine (Anhydrous,) percent by mass, Max	0. 3
(iv)	Solubility in boiling water	Dissolves in 30 seconds with moderate stirring
(v)	Solubility in cold water at 16+/- 2˚C	Dissolve in 3 minutes with moderate stirring]

2.10.3: CHICORY

1. Chicory means the roasted chicory powder obtained by roasting and grinding of the cleaned and dried roots of chicorium intybus Lin with or without the addition of edible fats and oils or sugar, like glucose or sucrose in proportion not exceeding 2.0 percent by weight in aggregate. It shall be free from dirt, extraneous matter, artificial colouring and flavouring agents.

It shall conform to the following standards, namely:—

(i)	Total ash (on dry basis) m/m	Not less than 3.5 percent and Not more than 8.0 percent
(ii)	Acid insoluble ash (on dry basis) m/m in diluted HCl	Not more than 2.5 percent
(iii)	Aqueous extracts (on dry basis) m/m	Not less than 55.0 percent

2.10.4: COFFEE - CHICORY MIXTURE

1. Coffee - Chicory Mixture means the product prepared by mixing roasted and ground coffee and roasted and ground chicory and shall be in a sound, dry and dust free condition with no rancid or obnoxious flavour. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristic of coffee - chicory powder. It shall be free from any impurities and shall not contain any other added substance. The coffee content in the mixture shall not be less than 51 per cent by mass. The percentage of coffee and chicory used shall be marked on the label as provided in

Regulation 2.4.5 (1) (i) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

It shall conform to the following standards, namely:—

(i)	Moisture	Not more than 5.0 per cent.
(ii)	Total ash on dry basis	Not more than 7.50 per cent.
(iii)	Acid insoluble ash on dry basis	Not more than 0.6 per cent.
(iv)	Caffeine content on dry basis	Not less than 0.6 per cent.
(v)	Aqueous extracts	Not more than 50 per cent.

2. Instant Coffee - Chicory Mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in sound dry and dust free condition with no rancid or obnoxious flavour. It shall be in the form of a free flowing powder or shall be in the agglomerated (granules) form having the colour, taste and flavour characteristics of coffee chicory powder. It shall be free from any impurities and shall not contain any other added substance. The coffee content in the mixture shall not be less than 51 per cent by mass on dry basis. The percentage of coffee and chicory used shall be marked on the label as provided in Regulation 2.4.5 (1) (ii) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

It shall conform to the following standards, namely:—

(i)	Moisture	Not more than 4.0 per cent.
(ii)	Total ash on dry basis	Not more than 10 per cent.
(iii)	Acid insoluble ash on dry basis	Not more than 0.6 per cent.
(iv)	Caffeine (anhydrous)	Not less than 1.4 per cent on dry basis.
(v)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring
(vi)	Solubility in cold water at 16 ± 20C	Soluble with moderate stirring in 3 minutes

Amendment for insertion of new provision

[75]**[3. Decaffeinated Roasted and Ground coffee-chicory mixture.-**

(1) Decaffeinated Roasted and Ground coffee-chicory mixture means the product prepared by mixing decaffeinated roasted and ground coffee and roasted and ground chicory.

(2) It shall be in a sound, dry and dust free condition with no rancid and obnoxious flavor. It shall be in the form of a free flowing powder having color, taste, flavour characteristic of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance.

(3) The coffee content in the mixture shall not be less than 51 percent by mass. *{The percentage of coffee and chicory used shall be marked on the label as per the Food Safety and standards (Labelling & Display) Regulations, 2020}.

(4) It shall conform to the following standards, namely:-

S. No.	Parameters	Requirements
1.	Moisture, percent. by mass, Max.	5.0

2.	Total ash on dry basis, percent. by mass, Max.	7.50
3.	Acid Insoluble ash on dry basis, percent. by mass, Max.	0.6
4.	Caffeine content on dry basis, percent. by mass, Max.	0.1
5.	Aqueous extracts, percent. by mass, Max.	50

4. Decaffeinated Instant coffee-chicory mixture.- (1) The product manufactured from decaffeinated roasted and ground coffee and roasted and ground chicory. It shall be in a sound, dry and dust free condition with no rancid & obnoxious flavor. It shall be in the form of a free flowing powder or shall be in agglomerated (granules) form having the color, taste, flavour characteristic of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance.

(2)The coffee content in the mixture shall not be less than 51 percent by mass on dry basis. *{The percentage of coffee and chicory used shall be marked on the label as per the Food Safety & Standards (Labelling & Display) Regulations, 2020}.

(3) It shall conform to the following standards, namely:-

S. No.	Parameters	Requirements
1.	Moisture, percent. by mass, Max.	4.0
2.	Total ash on dry basis, percent. by mass, Max.	10
3.	Acid Insoluble ash on dry basis, percent. by mass, Max.	0.6
4.	Caffeine content on dry basis, percent. by mass, Max.	0.3
5.	Solubility in boiling water	Dissolves in 30 seconds with moderate stirring
6.	Solubility in water at 16± 2 ^{0} C	Dissolves in 3 minutes with moderate stirring]

*[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022; *FBOs to comply with the provisions by 1st July 2022 vide vide Direction: F.No. REG/L&D-Extension/FSSAI-2021 dated 22nd October, 2021]*

2.10.5 [70][****]

2.10.6 [72][BEVERAGES NON-ALCOHOLIC]

1. **CARBONATED WATER** means water conforming to the standards prescribed for Packaged Drinking Water [72][or mineral water] under Food Safety and Standard Act, 2006 impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination:

1. Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey, fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic carobean, furcellaran, tragacanth, gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins, Caffeine not exceeding 145 parts per million, Estergum (Glycerol ester of wood resin) not exceeding 100 parts per million, Gellan Gum at GMP level and quinine salts not exceeding 100 parts per million (expressed as quinine sulphate). It may also contain Saccharin Sodium not exceeding 100 ppm or Acesulfame-K not exceeding 300 ppm or Aspertame (methyl ester) not exceeding 700 ppm. or sucralose not exceeding 300 ppm or Neotame not exceeding 33 ppm.

[33][Provided that the products which contain aspertame, acesulfame or any other artificial sweetener for which special labelling provisions have been provided under regulations 2.4.5 (24,25,26, 28 and 29) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011, shall not be packed, stored, distributed or sold in returnable containers.]

Amendment for substitution of highlighted provision

[77][Provided that the products which contain aspartame, acesulfame-K or any other non-caloric sweetener(s) for which special labelling provisions have been provided under Schedule II of Food Safety and Standards (Labelling and Display) Regulations, 2020, may be packed, stored, distributed or sold in returnable containers subject to the compliance of these labelling provisions for non-caloric sweeteners prominently on the label of bottle/container but not on crown.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

It shall conform to the following requirements, namely—

(1) Total plate count per ml not more than that.....50 cfu.

(2) Coliform count in 100 ml .....0 cfu.

(3) Yeast and mould count per ml not more than..... 2 cfu.

Provided further estergum used in carbonated water shall have the following standards, namely: —

Glycerol esters of wood rosins commonly known as ester-gum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent rosin acids and 10 per cent neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpeniod monocarboxylic acids having the typical molecular formula of C_{20} H_{30} O_2 chiefly abietic acid. The substance is purified by steam stripping or by counter-current

steam distillation.

Identification:

Solubility-Insoluble in water, soluble in acetone and in Benzene.

Infra Red Spectrum-Obtain the infra-red spectram of a thin film of the sample deposited on a potassium bromide plate-scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure ester-gum.

Test for absence of tall oil rosin (Sulphur test)-Pass the test as given below:

When sulphur-containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulfide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus-Test Tube: Use a standard, 10x75 mm, heat-resistant, glass test tube, Burner - Bunsen: A small size burner of the microflame type is preferred.

Reagents

Sodium Formate Solution: Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water. Lead Acetate Test Paper: Commercially available from most chemical supply houses.

Procedure-Weigh 40-50 mg of sample into a test tube and 1-2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds.

Detection Limit: 50 mg/kg sulphur).

Drop softening point-Between 880 C and 960 C.

Arsenic- Not more than 3ppm.

Lead- Not more than 10ppm.

Heavy metals (as lead)- Not more than 40 ppm.

Acid value- Between 3 and 9.

Hydroxyl number- Between 15 and 45.

[24][“2. Caffeinated Beverage. -

The following are the standards for caffeinated beverages:

Amendment for substitution of highlighted provision

[75][The following are the standards for Carbonated and Non- Carbonated caffeinated beverages:]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

(I) Water used in preparation of caffeinated beverages should conform to the standards of packaged drinking water as prescribed in regulation 2.10.8 [72][or mineral water as prescribed in regulations 2.10.7] of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

(II) Essential Composition: It shall contain not less than 145mg per liter and not more than 300 mg per litre total caffeine from whatever sources it may be derived in the formulation of the product.

(III) Optional ingredients: It may contain the following:

Any of the substances listed in column (1) of the table given below provided that the amount of that substance is not more than the amount specified in relation to that substance in column (2) of the table:

(A) Any additional item or ingredient proposed to be added (other than the substances prescribed in the said table will be subject to approval by the Food Authority after safety assessment and substantiating scientific evidence.

(i) A declaration "**consume not more than 500 ml per day"** shall be made on the label that represents the per day quantity.

(ii) The per day quantity is the maximum amount of caffeinated beverage (as package or serves) that is consumed in one day and determined as in sub-clause (iii).

(iii) Where any one of the substances given in column (1) of the following table is consumed at the maximum level given in column (2), it shall represent the per day quantity and the declaration shall be made on the basis of the number of packs of serves that cumulatively delivers this amount when consumed in a day.

Explanation: if taurine is used at 1000mg and D-glucurono-Y-lactone at 300mg in a 250ml pack the per day quantity is reached by consuming 2×250ml packs and represents the one-day quantity. If the pack size is a 125ml bottle, then the per day quantity is reached by consuming 4×125ml bottles."

(B) The vitamins namely, thiamine, riboflavin, niacin, vitamin B6, vitamin B12 may be added at one Recommended Daily Allowance level (100% Recommended daily allowance)

Table

Column (1)	**Column (2)**
Substance	Maximum amount per day consumption
Taurine	2000mg
D-glucurono-Y-lactone	1200mg
Inositol	100mg
Pantothenic Acid	10mg

(IV) In respect of ingredients, flavors, sweeteners, food additives, contaminants and microbiological requirement the product shall conform to the standards for carbonated water.

(V) Labelling: The product shall comply with all provisions of General Labelling requirements of Food Safety and Standards (Packaging and Labelling) Regulations, 2011 for pre-packaged foods, with the following additional provisions: -

a) High Caffeine: **"X mg/serving size"** (where X is the amount of caffeine in milligrams per pack/serve;

b) Prominent display of caution **"Not recommended for children, pregnant or lactating women, persons sensitive to caffeine.]**

[35]**[3. Non-carbonated Water Based Beverages (Non-Alcoholic)** means beverages containing water conforming to the standards prescribed for packaged drinking water [72][or mineral water] under these regulations without added carbon dioxide and may contain ingredients as specified in sub-clause (i), singly or in combination:

Amendment for substitution of highlighted provision

[75][Non-carbonated Water Based Beverages (Non-Alcoholic) means beverages containing water conforming to the standards prescribed for packaged drinking water or mineral water under these regulations without added carbon dioxide and shall contain ingredients as specified in sub-clause (i), singly or in combination:]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

(i) Ingredients.- Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey, salt and salt substitutes, fruits or flowers or vegetables and their products including extractives, herbs, spices and their derivatives and permitted flavouring, singly or in combination and the non-carbonated water may contain caffeine not exceeding 145 parts per million from whatever sources it may be derived in the formulation of the product:

Provided that added herbs shall comply with safety requirements as specified in the Food Safety and Standards Act, 2006 and the regulations made thereunder, and shall also be declared on the label.

(ii) Food Additives.- For products covered under this standard, specific food additives permitted in Appendix A may be used within the limits specified.

(iii) Hygiene.- The products shall conform to the microbiological requirements given in Appendix B.

(iv) Labelling.- The products shall comply with the packaging and labelling requirements as laid down under the provision of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

Note:
1. Data of toxicological analysis to be provided for its approval for the herbs other than those specified in the Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special

Dietary Use, Food for Special Medical Purpose, Functional Food and Novel Food) Regulations, 2016, and these regulations when added in the beverages.
2. No psychotropic substance, as defined in the Schedule to the Narcotic Drugs and Psychotropic Substances Act, 1985 (61 of 1985) and the rules made thereunder, and substances listed in Schedules E and E1 of the Drugs and Cosmetics Rules, 1945, shall be included.]

2.10.7 Mineral water

1. Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2. Description and Types of Mineral water.

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents;

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and not from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) it is collected under conditions which guarantee the original microbiological purity and chemical composition of essential components;

(e) it is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) it is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water- A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give off carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is a natural mineral water which,

after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

[50][(vii) Natural Spring Water – Natural spring water is natural mineral water which is derived from an underground formation from which water flows naturally to the surface of the earth at an identified location. Spring water shall be collected only at the spring or through a borehole tapping the underground formation feeding the spring. There shall be a natural force causing the water to flow to the surface through an orifice.

The product shall conform to the standards for mineral water as specified in clause 4 of this sub-regulation, except Total Dissolved Solids (TDS) content.

"TDS of the product shall be not more than 750 mg/litre]

[50][3. Treatment and handling]:- Treatment permitted includes separation from unstable constituents, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source on the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular —

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,

(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements;

(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated;

(d) The related packaging and labelling requirements are provided in the Regulation 2.1.2, 2.2.1 and 2.4.5 of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

[50][4. All Mineral Water shall conform to the following standards], namely:—

Sl.No.	*Characteristic*	*Requirements*
(1)	(2)	(3)

(1)	Colour, hazen unit/true colour unit	not more than 2
(2)	Odour	Agreeable
(3)	Taste	Agreeable
(4)	Turbidity	Not more than 2 nephelometric turbidity unit (NTU)
(5)	Total Dissolved Solids	150-700 mg/litre
(6)	pH	6.5-8.5
(7)	Nitrates (as NO_3)	Not more than 50 mg/litre
(8)	Nitrites (as NO_2)	Not more than 0.02 mg/litre
(9)	Sulphide (as H_2S)	Not more than 0.05 mg/litre
(10)	Mineral oil	Not more than 0.05 mg/litre Absent
(11)	Phenolic compounds (as C_6H_5OH)	Absent
(12)	Manganese (as Mn)	Not more than 2.0 mg/litre
(13)	Copper (as Cu)	Not more than 1 mg/litre
(14)	Zinc (as Zn)	Not more than 5 mg/litre
(15)	Fluoride (as F)	Not more than 1 mg/litre
(16)	Barium (as Ba)	Not more than 1.0 mg/litre
(17)	Antimony (as Sb)	Not more than 0.005 mg/litre
(18)	Nickel (as Ni)	Not more than 0.02 mg/litre
(19)	Borate (as B)	Not more than 5 mg/litre
(20)	Surface active agents	Not detectable
(21)	Silver (as Ag)	Not more than 0.01 mg/litre
(22)	Chlorides (as Cl)	Not more than 200 mg/litre
(23)	Sulphate (as SO_4)	Not more than 200 mg/litre
(24)	Magnesium (as Mg)	Not more than 50 mg/litre
(25)	Calcium (as Ca)	Not more than 100 mg/litre
(26)	Sodium (as Na)	Not more than 150 mg/litre
(27)	Alkalinity (as HCO_3)	75-400 mg/litre
(28)	Arsenic (as As)	Not more than 0.05 mg/litre
(29)	Cadmium (as Cd)	Not more than 0.003 mg/litre
(30)	Cyanide (as CN)	Absent
(31)	Chromium (as Cr)	Not more than 0.05 mg/litre
(32)	Mercury (as Hg)	Not more than 0.001 mg/litre
(33)	Lead (as Pb)	Not more than 0.01 mg/litre
(34)	Selenium (as Se)	Not more than 0.05 mg/litre
(35)	Poly nuclear aromatic hydrocarbons	Not Detectable
(36)	Polychlorinated biphenyle (PCB)	Not detectable
(37)	Pesticide Residue	below detectable limits

(38)	"Alpha" activity	Not more than 0.1 Bacquerel/litre (Bq)
(39)	"Beta" activity	Not more than 1 Bacquerel/litre (Bq)]
(40)	Yeast and mould counts	Absent
(41)	Salmonella and Shigella	Absent
(42)	E.Coli or thermotolerant Coliforms 1 x 250 ml	Absent
(43)	Total coliform bacteria A x 250 ml	Absent
(44)	Fecal streptococci and Staphylococcus aureus 1 x 250 ml	Absent
(45)	Pseudomonas aeruginosa 1 x 250 ml	Absent
(46)	Sulphite-reducing anaerobes 1 x 50 ml	Absent
(47)	Vibrocholera 1 x 250 ml	Absent
(48)	V Paraheamolyticus 1 x 250 ml	Absent

Amendment for insertion of new provision

[75]**[Parameters concerning pesticide residues**

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
1.	Pesticide residues considered individually	Not more than 0.0001 mg/l
2.	Total pesticide residue	Not more than 0.0005 mg/l]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

[24][5. Blue tint as provided in Indian Standard, IS: 9833 may be allowed in plastic container of five liters and above made of poly carbonate and Poly Ethylene Terephthalate (PET) used for Packaging mineral water:

Provided the overall migration of pigment/colour used in container should not exceed 60 mg/liter as per IS: 9845.]

[23][2.10.8 Packaged Drinking Water (other than Mineral Water)

1. Means water, other than natural mineral water that is likely to be used for human consumption and that is offered or sold in packaged form, by whatever name it may be called, offered or sold.

2. Water shall be derived from surface water or civic water supply or underground water or sea water or any other consistent source of water which may be subjected to herein under specified treatments, namely, decantation, filtration, combination of filtration, aerations, filtration with membrane filter depth filter, cartridge filter, activated carbon filtration, demineralization, remineralization, reverse osmosis and packed after disinfecting the water to a level that shall not lead to any adverse effect in the drinking water by means of chemical agents or physical methods to reduce the number of micro-organisms to a level scientifically accepted level for food safety or its suitability.

   Provided that sea water, before being subjected to the above treatments, shall be subjected to desalination and related processes.

Amendment for substitution of highlighted provision

[75][2. Water shall be derived from surface water or civic water supply or underground water or sea water or any other consistent source of water which may be subjected to herein under specified treatments, namely, decantation, distillation, filtration, combination of filtration, aerations, filtration with membrane filter depth filter, cartridge filter, activated carbon filtration, demineralization, remineralization, reverse osmosis and packed after disinfecting the water to a level that shall not lead to any adverse effect in the drinking water by means of chemical agents or physical methods to reduce the number of micro-organisms to a level scientifically accepted level for food safety or its suitability.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

3. It shall be filled in sealed containers of various compositions, forms and capacities that are suitable for direct consumption without further treatment. In case remineralization is a part of the treatment process, the ingredients used shall conform to food grade/pharma grade quality.

4. Packaged drinking water shall be clear without any sediments, suspended particles and extraneous matter. It shall also comply with the requirements given in Tables 1, 2, 3, 4, 5 and 6.

Table 1: Microbiological Requirements

Packaged drinking water shall comply with the following requirements:

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
1.	*Coliform* bacteria, cfu/250 ml	Absent
2.	*Faecal Streptococci,* and *Staphylococcus aureus,* cfu /250 ml	Absent
3.	*Sulphite Reducing Anaerobes,* cfu/50 ml	Absent
4.	*Pseudomonas aeruginosa,* cfu*/250 ml*	Absent
5.	Aerobic Microbial Count at 20-22^{o} C in 72 h, cfu /ml, max	100
	at 37± 1^{o} C in 24 h, cfu /ml, max	20
6.	Yeast and mould/ 250 ml	Absent
7.	*Salmonella and Shigella,* cfu/250 ml	Absent
8.	*Vibrio cholera,* and *V. parahaemolyticus* cfu/250 ml	Absent

Table 2 Organoleptic and physical parameters

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
1.	Colour, true colour units, *Max*	2
2.	Odour	Agreeable as per IS-3025 Part 5 for odour.
3.	Taste	Agreeable [Action Tendency Scale a) or b) or c)] as per IS-3025 part 8 for taste.
4.	Turbidity, nephelometric turbidity unit (NTU), Max	2
5.	Total dissolved solids, mg/l, Max	500
6.	pH	6.0 - 8.5

Table 3 General parameters concerning substances undesirable in excessive amounts

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
1.	Barium (as Ba), mg/l, Max	0.7
2.	Copper (as Cu), mg/l, *Max*	0.05
3.	Iron (as Fe), mg/l, *Max*	0.1

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
4.	Manganese (as Mn), mg/l, *Max*	0.1
5.	Nitrate (as NO_3) mg/l, *Max*	45
6.	Nitrite (as NO_2), mg/l, *Max*	0.02
7.	Fluoride (as F), mg/l, *Max*	1.0
8.	Zinc (as Zn), mg/l, *Max*	5
9.	Silver (as Ag), mg/l, *Max*	0.01
10.	Aluminium (as A1), mg/l, *Max*	0.03
11.	Chloride (as Cl), mg/l, *Max*	200
12.	Selenium (as Se), mg/l, *Max*	0.01
13.	Sulphate (as SO_4), mg/l, *Max*	200
14.	Alkaliniity (as HCO_3), mg/l, *Max*	200
15.	Calcium (as Ca), mg/l, *Max*	75
16.	Magnesium (as Mg) , mg/l, *Max*	30
	Amendment for substitution of highlighted provision	
[61][15.	Calcium (as Ca), mg/l	20 to 75
16.	Magnesium (as Mg) , mg/l	10 to 30]
	[Amendment in force from 30th October, 2019; FBOs to comply with the provisions by 1st July 2022]	
17.	Sodium (as Na), mg/l, *Max*	200
18.	Residual free chloride, mg/l, *Max*	0.2
19.	Phenolic compounds (as C_6H_5OH),	Absent
20.	Mineral oil	Absent
21.	Anionic surface active agents (as MBAS), mg/l, *Max*	0.2
22.	Sulphide (as H_2S), mg/l, *Max*	0.05
23.	Antimony (as Sb), mg/l, *Max*	0.005

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
24.	Borates (as B), mg/l, *Max*	5
25.	Bromates (as BrO_3), mg/l, *Max*	0.01

Table 4 Parameters concerning toxic substance

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
1.	Mercury (as Hg), mg/l, *Max*	0.001
2.	Cadmium (as Cd), mg/l, *Max*	0.003
3.	Arsenic (as As), mg/l, *Max*	0.01
4.	Cyanide (as CN)	Absent
5.	Lead (as Pb), mg/l, *Max*	0.01
6.	Chromium (as Cr), mg/l, *Max*	0.05
7.	Nickel (as Ni), mg/l, *Max*	0.02
8.	Polychlorinated biphenyle (PCB)	Not detectable
9.	Polynuclear aromatic hydrocarbons	Not detectable

Table 5 Parameters concerning radio-active residues

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
1.	Alpha emitters, Becquerel (Bq/l), *Max*	0.1
2.	Beta emitters, Becquerel (Bq/l), *Max*	1

Table 6 Parameters concerning pesticide residues

Sr. No.	Characteristic	Permissible Limit
(1)	(2)	(3)
1.	Pesticide residues considered individually	Not more than 0.0001 mg/l
2.	Total pesticide residue	Not more than 0.0005 mg/l

5. The product shall comply with labelling requirements as laid down under the Food Safety and Standards (Packaging and Labelling), Regulations, 2011.]

[24][6. Blue tint as provided in Indian Standard, IS: 9833 may be allowed in plastic container of five liter and above made of poly carbonate and Poly Ethylene Terephthalate (PET) used for packaging packaged drinking water:

Provided the overall migration of pigment or colour used in container should not exceed 60 mg/liter as per IS: 9845.]

[58][**2.10.9 Drinking Water (Purified)**.- (1) Means water, other than packaged drinking water and natural mineral water which is offered or sold through water vending machine.

(2) Drinking water (purified) shall be clear without any sediments, suspended particles and extraneous matter which shall also comply with the requirements of Indian Standards, IS:10500.

Explanation.- For the purposes of this sub-regulation, "water vending machine" means decentralised water purification systems that purify and dispense waters and does not include installation intended for use of water for captive consumption]

2.11 OTHER FOOD PRODUCT AND INGREDIENTS

[72][**2.11.1 Baking powder**.-(1) Baking powder means a combination capable, under conditions of baking, of yielding carbon dioxide and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

(2) It shall be composed of a fine powder of sodium bicarbonate (INS 500(ii)) with suitable mixture of acidulants and an inert material of starch or other similar material, to keep the moisture below the critical conditions *i.e.* 5%.

(3) The baking powder shall contain the following ingredients:

(a) Sodium bicarbonate (INS 500(ii))

(b) It may also contain any of the following,-

(i) Edible starches - Starches obtained from cereals, roots and tubers;

(ii) Neutral materials- such as calcium lactate, anhydrous calcium sulphate, sodium sulphate, and other similar compounds such as gamma-delta lactone, acid pectin etc.

(c) Acidulants.-It shall be any one or combination of the following:

(i) Mono calcium phosphate mono hydrate INS 341 (iii)
(ii) Mono calcium phosphate anhydrous INS 341(iii)
(iii) Sodium aluminum phosphate INS 541(i)
(iv) Ammonium dihydrogen phosphate INS 342(i)
(v) Calcium carbonate INS 170(i)
(vi) Potassium bitartrate or potassium hydrogen tartrate (Cream of tartar)
(vii) Tartaric Acid INS 334

(viii) Tricalcium Phosphate INS 341(iii)
(ix) Glucono delta lactone
(x) Calcium silicate INS 552 (not more than 10%)
(xi) Aluminium sodium sulphate INS 521
(xii) Sodium acid pyrophosphate INS 450(i)

(4) It shall be in form of white free flowing powder and free of any off odour.
(5) When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.]

2.11.2 CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia Catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards:

(a) 5 ml. of 1 per cent aqueous solution and 0.1 per cent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100°C, it shall not lose more than 16 per cent of its weight.
(c) Water insoluble residue (dried at 100°C) shall not be more than 25 per cent by weight. Water insoluble matter shall be determined by boiling water.

(d)	Alcohol insoluble residue in 90 per cent alcohol dried at 100°C	Not more than 30 percent by weight.
(e)	Total ash on dry basis by weight.	Not more than 8 per cent
(f)	Ash insoluble in HCl	Not more than 0.5 per cent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 per cent.

2.11.3 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boluillon like. It is stable in air when dry but is subject to microbial decomposition when moist or in soluble. It shall not contain:—

(a) more than 15 per cent moisture;
(b) more than 3.0 per cent of total ash;
(c) more than 1000 parts per million of sulphur dioxide;
(d) less than 15 per cent of nitrogen, on dry weight basis.

[16]**[2.11.4 SILVER LEAF (Chandi-ka-warq):** food grade shall,-

(i) be in the form of sheet of uniform thickness, free from creases and folds;
(ii) have weight of silver foil upto 2.8 gm/Sq meter;
(iii) have silver content of minimum 999/1000 fineness;
(iv) not be manufactured using any material of animal origin at any stage;

(v) be in accordance with the provisions of the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Packaging and Labelling), Regulations, 2011.]

2.11.5 Pan Masala means the food generally taken as such or in conjunction with Pan, it may contain;—

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabnermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non prohibited flavours.

It shall be free from added coaltar colouring matter and any other ingredient injurious to health. It shall also conform to the following standards namely:—

Total ash	Not more than 8.0 per cent by weight (on dry basis)
Ash insoluble in dilute HCl acid	Not more than 0.5 per cent by weight (on dry (basis)

2.11.6 [56]**[****]**

2.11.7: CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L) Taub. (fam. Leguminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound, dry and fresh condition, free from rancid or obnoxious flavours. It shall also conform to the following standards, namely:—

Total ash	Not more than 1.2 per cent by weight.
Acid insoluble matter	Not more than 5 per cent by weight.
Tannin content	Not less than 0.1 per cent and not more than 0.15 percent

[15]**[2.11.8: Dietary Fibre (Dextrin – soluble fibre)** means glucose polymer of natural origin obtained by dextrinification, i.e. dry roasting acidified starch under specific conditions and further purified. The average degree of polymerization of Dietary Fibre (Dextrin – soluble fibre) is from 12-25 compared to several thousand for starch. Unlike starches and maltodextrins, which contain only "digestible" α- (1, 4) and α- (1, 6) glucosidic linkages, Dietary Fibre (Dextrin – soluble fibre) also shall contain "indigestible" α- and β- linkages.

Dietary Fibre (Dextrin-soluble fibre) may be used in the following food products at the level of Good Manufacturing Practices (GMP). It shall bear the label declaration as provided in serial number (54) of sub- regulation 2.4.5 of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, and the source of the ingredients (wheat/maize) shall be Non- Genetically Modified (GM):

Sl. No. (1)	Article of food (2)

1.	Flakes and ready-to-eat dry breakfast cereals
2.	Noodles and pasta
3.	Salad dressing or toppings and spreads
4.	Table top fibre as filler or carrier and cereals
5.	Other snack food or savouries
6.	Bakery products including biscuit, cookies, bread, cakes mix and pastries
7.	Other products where dextrin is allowed under these regulations.

Provided that in above products if it is intended to make claims on source of dietary fibre, it shall not contain less than 3g/100g or 1.5g/100Kcal:

Provided further that in above products if it is intended to make claims on high source of dietary fibre, it shall contain not less than 3g/100g or 1.5g/100 kCal and not more than 6g/100g or 3g/100 kCal.]

[30][**2.11.9: Special dietary food with low sodium content:-** (1) The special dietary food with low sodium content is a food whose special dietary value results from the reduction, restriction, or removal of sodium. It shall conform to the essential composition and standards namely standards applicable to such food excluding salt substitutes as such.

(2) ***Low sodium*** and ***Very low sodium*** food is a food conforming to the respective provisions regarding maximum sodium content specified, namely:-

(a) a special dietary food with ***low sodium*** content is a food which has been processed without the addition of sodium salts, and the sodium content of which is not more than one half of that of the comparable normal product as consumed, and the sodium content of which is not more than 120 mg/100 g of the final product as normally consumed;

(b) a special dietary food with ***very low sodium*** content is a food which has been processed without the addition of sodium salts, and the sodium content of which is not more than one half of that of the comparable normal product as consumed, and the sodium content of which is not more than 40 mg/100 g of the final product as normally consumed.

(3) The addition of salt substitutes conforming to clause (6) of sub-regulation 2.9.30 of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 to a special dietary food with low sodium content is permitted and shall be limited by good manufacturing practice (GMP) as provided under Food Safety and Standards Regulations, 2011.

(4)The special dietary Food with low sodium content shall conform to the following specific provisions for the labelling in addition to the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, namely:-

(a) the label shall bear the description "low sodium" or "very low sodium" in accordance with the provisions of sub-regulations 2.11.9 (2) (a) and 2.11.9 (2)(b) of this regulation;
(b) the sodium content shall be declared on the label to the nearest multiple of 5 mg per 100 g and, in addition per a specified serving of the food as normally consumed;
(c) the average carbohydrate, protein and fat content in 100 g of the product as normally consumed, and the kilocalorie (or kilojoule) value shall be declared on the label;
(d) the addition of the salt substitutes listed in clause (6) of sub-regulation 2.9.30 of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 shall be declared on the label.
(e) when a salt substitute, composed entirely or partially of a potassium salt, has been added, the total amount of potassium, expressed as mg cation per 100 g of the food as normally consumed, shall be declared on the label.
(f) in addition, the salt equivalent in terms of sodium chloride (NaCl) content should also be declared per serving and the total amount of NaCl in the packet.
(g) any special conditions for the storage of the food]

2.12 Proprietary Food

[20]**[2.12.1:** For the purpose of these regulations,-

(1) Proprietary food means an article of food that has not been standardised under these regulations, but does not include novel foods, foods for special dietary uses, foods for special medical purposes, functional foods, nutraceuticals, health supplements and such other food articles which the Central Government may notify in this behalf.

Provided that any deviation in quality parameters of a standardised food, as specified in the Food Safety and Standards Regulations made under the Food Safety and Standards Act, 2006 shall not qualify the resultant product as a proprietary food.

[57][(2) Proprietary food shall contain only those ingredients other than additives which are either standardised or permitted for use in the preparation of food products under the Food Safety Standards and Regulations and those food or ingredients mentioned in the Indian Food Composition Tables (IFCT), 2017, National Institute of Nutrition, except the ingredients which may be specified by the Authority from time to time and those specified under prohibition of hunting in the Indian Wildlife Protection Act, 1972 (53 of 1972):

Provided that a proprietary food may also contain vitamins and minerals in quantities not exceeding one Recommended Dietary Allowance of the respective micronutrients.]

(3) Proprietary food shall use only such additives and at such levels, as specified for the Category or Sub-category under Appendix A of these Regulations, to which the food belongs. Such Category or Sub-category shall be clearly mentioned on the label along with the generic name, nature and composition of the proprietary food.

(4) Proprietary food shall comply with the microbiological requirements as specified in Appendix B of these Regulations. If no microbiological standards are specified for any foods or food categories in Appendix B of these regulations, proprietary foods falling under such food categories shall not contain any pathogenic microorganism at a level that may render the food product unsafe.

(5) Proprietary food shall also comply with the provisions, as applicable, of all other Regulations made under the Food Safety and Standards Act 2006. No health claims shall be made in respect of proprietary foods either on the product label or otherwise, unless it is substantiated by adequate and scientific evidence.

(6) The Food Business Operator shall be fully responsible for safety of the proprietary food in respect of human consumption.]

[17][2.13 RADIATION PROCESSING OF FOOD

2.13.1: Dose of Radiation –-

(1) Save as provided in clause (2) of sub-regulation 2.13.1, no food shall be processed by radiation.

(2) No article of food permitted for radiation processing specified in the Table 1 and Table 2 given below shall receive the dose of radiation in excess of the quantity specified in the said Tables at the time of radiation processing -

Table 1: Classes of Food Products and Dose Limits for Radiation Processing

Class	**Food**	**Purpose**	**Dose Limit kGy (kilo Gray)**	
			Minimum	**Maximum**
1	2	3	4	5
Class 1	Bulbs, stem and root tubers and rhizomes	Inhibit sprouting	0.02	0.2
Class 2	Fresh fruits and vegetables (other than Class 1)	Delay ripening	0.2	1.0
		Insect disinfestation	0.2	1.0
		Shelf -life extension	1.0	2.5
		Quarantine application	0.1	1.0
Class 3	Cereals and their milled products, pulses and their milled products, nuts, oil	Insect disinfestation	0.25	1.0
		Reduction of microbial load	1.5	5.0

Class	Food	Purpose	Dose Limit kGy (kilo Gray)	
			Minimum	Maximum
1	2	3	4	5
	seeds, dried fruits and their products			
Class 4	Fish, aquaculture, seafood and their products (fresh or frozen) and crustaceans	Elimination of pathogenic micro organisms	1.0	7.0
		Shelf -life extension	1.0	3.0
		Control of human parasites	0.3	2.0
Class 5	Meat and meat products including poultry (fresh and frozen) and eggs	Elimination of pathogenic microorganisms	1.0	7.0
		Shelf -life extension	1.0	3.0
		Control of human parasites	0.3	2.0
Class 6	Dry vegetables, seasonings, spices, condiments, dry herbs and their products, tea, coffee, cocoa and plant products	Microbial decontamination	6.0	14.0
		Insect disinfestation	0.3	1.0
Class 7	Dried foods of animal origin and their products	Insect disinfestation	0.3	1.0
		Control of moulds	1.0	3.0
		Elimination of pathogenic micro organisms	2.0	7.0
Class 8	Ethnic foods, military rations, space foods, ready-to-eat, ready-to-	Quarantine application	0.25	1.0
		Reduction of microbial load	2.0	10.0

Class	Food	Purpose	Dose Limit kGy (kilo Gray)	
			Minimum	Maximum
1	2	3	4	5
	cook/ minimally processed foods.	Sterilization	5.0	25.0

Table 2: Dose Limits for Radiation Processing of Allied Products

Sr. No.	Allied Product	Purpose	Dose Limit kGy (kiloGray)	
			Minimum	Maximum
1	2	3	4	5
1.	Packaging materials for food or allied products	Microbial decontamination	5.0	10.0
		Sterilization	10.0	25.0
2.	Food additives	Insect disinfestation	0.25	1.0
		Microbial decontamination	5.0	10.0
		Sterilization	10.0	25.0
3.	Health foods, dietary supplements and nutraceuticals	Insect disinfestation	0.25	1.0
		Microbial decontamination	5.0	10.0
		Sterilization	10.0	25.0

(3) Routine quantitative dosimentry shall be carried out during operation and record kept of such measurements as provided under Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.

2.13.2: Requirement for Radiation Processing:

(1) Approval of facilities - No irradiation facility shall be used for the treatment of food unless such facility -

(i) has been approved and licensed under the Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.

(ii) complies with the conditions for approval, operation, license and process control prescribed under the Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.

(iii) carries out irradiation in accordance with the provisions of the Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.

(2) No food or irradiated food shall leave the irradiation facility unless it has been irradiated in accordance with the provisions of Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012 and a certificate of irradiation indicating the dose of irradiation and the purpose of irradiation is provided by the facility.

2.13.3: Restrictions on Radiation Processing of Food -

(1) The radiation processing shall conform to the dose limit, the radiation source, and the conditions specified for each type or category of food for processing by radiation, under the Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.

(2) The food which has been processed by radiation shall be identified in such a way so as to prevent its being subjected to re-irradiation.

(3) The radiation processing shall be carried out by personnel having the minimum qualifications and training as prescribed for the purpose under the Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.

(4) The food once irradiated shall not be re-irradiated unless specifically so permitted under these regulations.

2.13.4: Record of Radiation Processing of Food -

Any treatment of food by radiation shall be recorded by facility as specified under the Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.

2.13.5: Standards of Radiation Processed Food -

The Radiation processed food shall comply with all the provisions of the Food Safety and Standards Act and the Regulations made thereunder specifying standards of such food.

2.13.6: **Storage and Sale of Radiation Processed Food -**

Save as otherwise provided in these regulations, no person shall irradiate for sale, store for sale, or transport for sale irradiated food.

2.13.7: **Restriction on Sale of Radiation Processed Food -**

The Radiation processed food shall be offered for sale only in pre-packaged conditions.

2.13.8: Labelling of Radiation Processed Food -

(1) The label of a food, which has been treated with ionizing radiation, shall carry a written statement indicating the treatment in close proximity to the name of the food.

(2) All packages of radiation processed food shall bear the Radura logo in green colour and following declaration, namely:—

PROCESSED BY RADIATION

Name of the Product:

Purpose of Radiation Processing:

Operating License No. :

Batch Identification No. (BIN) (as provided by facility):

Date of Processing.....……"]

[13][2.14 Gluten Free Food. - (1) Gluten free food consist of or is made of one or more ingredients containing rice, millets, ragi, pulses or legumes.

(2) It shall bear the label declaration referred to in sub-regulation 2.4.5 (50) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

[73][(3) A food which, by its nature, is suitable for use as part of a gluten free diet shall not be named as 'special dietary', 'special dietetic' or any other equivalent term, however, such food may bear a statement on the label that 'This food is by its nature gluten free':

Provided that it complies with the essential composition provisions for gluten free food as set out in sub-regulation 2.14 (4) and such a statement does not mislead the consumer.]

(4) For the purpose of labelling of a product as gluten free, when such a product is analysed, the gluten levels shall be below 20 mg/kg as per the method declared by the Organization for Economic Co-operation and Development or the Association of Official Agricultural Chemists.

[73][****]

[73][****]

Amendment for insertion of new provision

[77][2.16. Hemp seeds and seed products:

(1) For the purpose of these regulations, hemp seed means the hulled[1], non-viable[2] seeds[3] obtained from *Cannabis sativa*/other indigenous *Cannabis*species. The cultivation of *Cannabis species* for the purpose of hemp seeds in India shall comply with Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 and rules made thereunder.

(2) The hemp seed, hemp seed oil and hemp seed flour shall be sold as food or used as an ingredient in a food for sale subject to conforming to the following standards:

(i) Hemp seed:

S. No	Parameters	Requirements
1.	Moisture, percent m/m, Max.	7.0
2.	Protein (N x 6.25), percent m/m, Min.	30.0
3.	Fat, per cent m/m, Min.	45.0
4.	Ash, per cent m/m, Max.	6.0
5.	Total THC[4], mg/kg, Max.	5.0

(ii) Oil extracted from hemp seeds

S. No	Parameters	Requirements
1.	Free fatty acid (expressed asOleic Acid), per cent m/m, Max.	0.50
2.	Peroxide value, mEq/kg, Max.	10.0
3.	Total THC[4], mg/kg, Max.	10.0

(iii)**Hemp seed flour** means solid product after seeds are milled to a powder with or without extraction of oil. The flour prepared after hemp seed has been pressed to extract oil shall clearly be labelled as 'Deoiled hemp seed flour'.

S. No	Parameters	Requirements

1.	Total THC, mg/kg, Max.	5.0

(iv) The total THC shall not exceed 0.2 mg/kg in any beverages made from hemp seeds.

(v) Any other food for sale that consists of hemp seed or seed products shall not exceed Total THC content of 5 mg/kg.

(3) The level of cannabidiol[5] (CBD) in any food for sale consisting of hemp seed or seed products shall not exceed 75 mg/kg.

(4) Cannabinoids[6] in any food for sale consisting of hemp seed or seed products shall only be present naturally in or on the seeds.

(5) The food for sale that consists of hemp seed or seed products shall not be labelled or otherwise presented for sale in a form which expressly or by implication suggests that the product has a psychoactive effect.

(6) The label for the food containing hemp seed or seed products for sale shall not include:

(a) a nutrient content claim about cannabidiol; or

(b) a health claim about cannabidiol; or

(c) an image or representation of any part of the *Cannabis* plant (including the leaf of that plant) other than the seed; or

(d) the words 'cannabis', 'marijuana' or words of similar meaning.

(7) The label for the food containing hemp seed or seed products for sale may include the word 'Hemp'.

(8) No person shall manufacture, import or sale any food product containing hemp seed or seed products intended for administration to infant upto the age of 24 months.

Note:-

1. Hulled seeds mean seeds from which the outer coat or hull of seeds has been removed.

2. Non-viable seeds mean seeds that are not able to germinate.

3. Seeds include a part of a seed.

4. Total THC means the total amount of delta 9-tetrahydrocannabinol (THC) and delta 9-tetrahydrocannabinolic acid.

5. Cannabidiol (CBD) is the non-psychoactive component of *Cannabis species*.

6. Cannabinoids means any of various naturally-occurring, biologically active, chemical constituents such as cannabidiol or cannabinol of *Cannabis species*including some that possess psychoactive properties like delta 9-tetrahydrocannabinol (THC).]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

Chapter 3:
SUBSTANCES ADDED TO FOOD

[18][3.1: Food Additives
3.1.1:

(1) Food Additives included in these Regulations

The food additives listed herein are recognised as suitable for use in foods in conformance with the provisions of these regulations and have been assigned an Acceptable Daily Intake (ADI) or determined, on the basis of other criteria, to be safe and use of additives in conformance with these regulations is considered to be technologically justified.

(2) Food in which Additives may be used

Theconditions under which food additives may be used in foods, whether or not they have previously been permitted by the Food Safety and Standards (Food Standards and Food Additives) regulations, 2011.

(3) Foods in which Additives may not be used

Food categories or individual food items in which the use of food additives is not allowed, or where use should be restricted, are defined by these Regulations.

(4) Food Additive means any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods but does not include contaminants or substances added to food for maintaining or improving nutritional qualities.

(5) Acceptable Daily Intake (ADI) means the amount of a food expressed on a body weight basis that can be ingested daily over a lifetime without appreciable health risk andan additive, meeting this criterion shall be used within the bounds of Good Manufacturing Practice (GMP) as specified in clause (8) of this sub-regulation.

(6) Maximum Use Level of an additive is the highest concentration of the additive determined to be functionally effective in a food or food category and agreed to be safe and it is generally expressed as mg/kg of food andthe maximum use level shall not usually correspond to the optimum, recommended, or typical level of use and under Good Manufacturing Practice (GMP), the optimum, recommended, or typical use level will differ for each application of an additive and is dependent on the intended technical effect and the specific food in which the additive would be used, taking into account the type of raw material, food processing and post-manufacture storage, transport and handling by distributors, retailers, and consumers. [52][Unless otherwise specified, maximum use levels for additives in Tables are set on the final product as consumed.]

(7) Justification for the use of Food Additives

The use of food additives is justified only when such use has an advantage, does not present an appreciable health risk to consumers, does not mislead the consumer, and serves one or more of the technological functions as specified in these regulations and the needs set out in sub-clause (a) to (d) below, and only where these objectives cannot be achieved by other means that are economically and technologically practicable:

(a) to preserve the nutritional quality of the food; an intentional reduction in the nutritional quality of a food shall be justified in the circumstances dealt within sub-clause (b) and also in other circumstances where the food does not constitute a significant item in a normal diet;

(b) to provide necessary ingredients or constituents for foods manufactured for groups of consumers having special dietary needs;

(c) to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that it does not change the nature, substance or quality of the food so as to deceive the consumer;

(d) to aid in the manufacture, processing, preparation, treatment, packing, transport or storage of food, provided that the additive is not used to disguise the effects of the use of faulty raw materials or of undesirable (including unhygienic) practices or techniques during the course of any of these activities.

(8) Good Manufacturing Practice (GMP)

All food additives subject to the provisions of these regulations shall be used under conditions of Good Manufacturing Practice, which includes the following, namely:-

(a) the quantity of the additive added to food shall be limited to the lowest possible level necessary to accomplish its desired effect;

(b) the quantity of the additive that becomes a component of food as a result of its use in the manufacturing, processing or packaging of a food and which is not intended to accomplish any physical, or other technical effect in the food itself, is reduced to the extent reasonably possible; and,

(c) The additive is of appropriate food grade quality and is prepared and handled in the same way as a food ingredient.

(9) Specifications for the Identity and Purity of Food Additives

Food additives used in accordance with these regulations shall be of appropriate food grade quality and should at all times conform with the applicable Specifications of Identity and Purity recommended under these regulations and in terms of safety, food grade quality is achieved by conformance of additives to their specifications as a whole (not merely with individual criteria) and through their production, storage, transport, and handling in accordance with Good Manufacturing Practice (GMP).

(10) Carry-Over of Food Additives into Foods

(a) Conditions applying to carry-over of Food Additives from ingredients and raw materials into foods

Other than by direct addition, an additive may be present in a food as a result of carry-over from a raw material or ingredient used to produce the food, provided that,-

(i) the additive is acceptable for use in the raw materials or other ingredients (including food additives) in accordance with the provisions of these Regulations;

(ii) the amount of the additive in the raw materials or other ingredients (including food additives) does not exceed the maximum use level specified in these regulations;

(iii)the food into which the additive is carried over does not contain the additive in a quantity greater than thatshall be introduced by the use of raw materials, or ingredients under proper technological conditions or manufacturing practice, consistent with the provisions of these regulations.

(b) Special conditions applying to the use of Food Additives not directly authorised in food ingredients and raw materials

An additive may be used in or added to a raw material or other ingredient if the raw material or ingredient is used exclusively in the preparation of a food that is in conformity with the provisions of these regulations, including that any maximum level applying to the food is not exceeded.

(d) Foods for which the carry-over of Food Additives is unacceptable

Carry-over of a food additive from a raw material or ingredient shall not be permissible for foods belonging to the following food categories; unless a food additive provision in the specified category is mentioned in these regulations:

(i) infant formulae, follow-up formulae, and formulae for special medical purposes for infants.

(ii) complementary foods for infants and young children.]

3.2: Standards of Additives

3.2.1Food Colours: Standards of various Food Colours with characteristics are specified in the table below:

1. Tartrazine

Common Name	Tartrazine
Synonyms	FD and C Yellow No.5, E.E.C. Serial No.E 102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 Per cent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No 19140
Class	Monoazo.
Chemical Name	Trisodium salt of 5-hydroxy-1-p- sulphopheny1-4-(p- sulphophenylazo) pyrazol-3-carboxylic acid.
Empirical formula	C_{16} H_9 N_4 O_9 S_2 Na_3
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in Ethanol.

General Requirements

The material shall conform to the requirements prescribed in Table below:—

TABLE

Sl. No.	*Characteristic*	*Requirement*
1.	Total dye content, corrected for Sample dried at 105±1°C for 2 hours, per cent by mass, Min.	87
2.	Loss on drying at 135°C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass,max	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg, Max.	3
9.	Heavy metals, mg/kg, Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

2. SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.l. Food Yelow 3, -Orange 2, Janune soil, EEC Serial No.E.10
Colour of the 0.1 Percent (M/V) solution in distilled water	Orange
Colour Index Number (1975)	No 15985
Class	Monoazo
Empirical formula	Disodium salt of 1.(4-sulphophenylazo) 2-napthol-6-sulphonic acid
Chemical Name	$C_{10}H_{10}N_2O_7S_2Na_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in Ethanol

General Requirements

The material shall conform to the requirements prescribed in Table below:—

TABLE

Requirements for Sunset Yellow, FCF

Sl. No. Requirements for Sunset Yellow, FCF Characteristic	*Requirement*
1. Total dye content, corrected for Sample dried at 105±1°C for 2 hours, per cent by mass, Min.	87
2 Loss on drying at 135°C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max	13
3. Water insoluble matter, percent by mass, Max.	0.2
4. Combined ether extracts, percent by mass. Max.	0.2
5. Subsidiary dyes, (lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6. Dye intermediates, percent by mass, Max.	0.5
7. Lead, mg/kg, Max.	10
8. Arsenic, mg/kg, Max.	3
9. Heavy metals, mg/kg, Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides;

3. ERYTHROSINE

Common Name	Erythrosine
Synonyms	FD and C red No.3, C.l. Food Red 14, LB-Rot-I

Colour of the 0.1 Percent (M/V) solution in distilled water	Red
Colour Index Number (1975)	No 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4', 5', 7', tetraiodo- fluerescein
Empirical formula	$C_{20}H_6O_5I_4Na_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Sparingly soluble in Ethanol

General Requirements

The material shall conform to the requirements prescribed in Table below:—

TABLE

Sl. No.	*Requirements for Sunset Yellow, FCF Characteristic*	*Requirement*
1.	Total dye content, corrected for Sample dried at 105°±1°C for 2 hours, per cent by mass, Min.	87
2.	Loss on drying at 135°C percent by mass and Chlorides and Sulphates expressed as sodium salt percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter,(alkaline), percent by mass. Max.	0.2
5.	Inorganic Iodide, percent by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except flourescein, percent by mass, Max.	4
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter (a) Tri-iodoresorcinol, percent by mass, Max. (b) 2.(2,4-dihydroxy-3,5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	0.2 0.2 0.2
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg, Max.	3
11.	Zinc, mg/kg, Max.	50
12.	Heavy metals, mg/kg, Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

4. INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue No.2, Cl Food Blue 1, EEC Serial No. E132 L-Blue 2
Colour of the 0.1 Percent (M/V) solution in distilled water	Blue
Colour Index Number (1975)	No 73015
Class	Indigoid
Chemical Name	Disodium Salt of indigotine-5, 5'-Disulphonic acid

Empirical formula	$C_{16}H_8N_2O_8S_2Na_2$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in Ethanol

General Requirements

The material shall conform to the requirementsprescribed in Table below:-

TABLE

Requirement for Indigo Carmine

Sl. No.	*Characteristic*	*Requirement*
1.	Total dye content, corrected for Sample dried at 105±1oC for 2 hours, per cent by mass, Min.	85
2.	Loss on drying at 135oC, percent by mass and Chlorides and Sulphates expressed as sodium salt, 15 percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass. Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Isatin Sulphonic acid, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg, Max.	3
9.	Heavy metals, mg/kg, Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

5. β-CAROTENE.

β-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quardratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26
Colour Index Number (1956)	No.75130
Class	Carotenoids
Chemical Name	all trans β-Carotene
Empirical formula	C_{40} H_{56}
Molecular Weight	536.89
Melting Point	183°C ± 1°C

Solubility.- Soluble in carbon disulphide, benzene and chloroform, moderately soluble in normal hexane, cyclohexane, ether, petroleum ether and oils; practically insoluble in methanol; insoluble in water.

Spectrophotometric Requirement.-The wavelengths of absorption maxima of all trans β-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in-1cm cell shall be 456 mμ to 484 mμ region. There shall be no cis-peak in the 330 mμ to 355 mμ region.

A solution of β-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wavelength of 590 mμ.

Colour Reaction- When 2ml. of concentrated sulphuric acid is added to 2ml. of 0.2 per cent solution of β-Carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 per cent.

Maximum limit of metallic impurities shall be:—

Arsenic (as As)	3 ppm
Lead (as Pb)	10 ppm.
Heavy metal	40 ppm.

And shall also meet the following requirements:—

(i)	Subsidiary colouring matter, percent by weight, Max	3
(ii)	Sulphated ash, percent of total colouring matters, Max	0.1

6-CHLOROPHYLL:

Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. Natural Green 3; Lebensmittel Green No.1
Colour Index Number (1956)	No.75810
Colour Index Number (1924)	No. 12499
Color	Green
Class	Phorbin (dihydrophorphin)
Chemical Name	Chlorophyll a - magnesium complex of 1,3,5,8-tetramethyl 4-ethyl-2-vinyl-9-keto-10 carbomethoxy phorbinphytyl-7-propionate. Chlorophyll b magnesium complex 1,5,8 trimethyl-3-formyl-4-ethyl-2-vinyl-9-keto-10 carbomethoxyphorbinphytyl-7-propionate
Empirical formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b- $C_{55}H_{70}O_6N_4Mg$
Molecular Weight	Chlorophyll a- 893.54 Chlorophyll b - 907.52

General- The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test- A solution of chlorophyll in ethanol shall be blue with deep red flourescence.

Brown-phase Reaction-When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 per cent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note.- This test is applicable only when chlorophyll has not been treated with alkalies.

Maximum limits for metallic impurities shall be:—

Arsenic (as As)	3 ppm
Lead (as Pb)	10 ppm
Copper (as Cu)	30 ppm
Zinc (as Zn)	50 ppm

The material shall also conform to the following requirements:—

CHLOROPHYLL - MAGNESIUM COMPLEX

Sl. No.	*Characteristic*	*Requirement*
1	Total combined phaeophytines and their magnesium complexes, percent by weight, max.	10
2	Residual solvents, mg/kg, Max. Acetone, methanol, ethanol, propan-2-ol, hexane	50
	Dichloromethane	10

7 - CARAMEL

Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:—

Type-I- Plain Caramel-It shall be prepared by heating carbohydrates with or without acids or alkalis, or their salts. No. ammonium or sulphite compounds are used.

Type-II- Caustic sulphite caramel- It shall be prepared by heating carbohydrates with or without acids or alkalis or their salt in the presence of sulphite compounds; no ammonium compounds are used.

Type - III- Ammonia Process Caramel- It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of ammonium compounds; no sulphites are used.

Type-IV- Ammonia Sulphite Caramel- It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1. Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:—

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions there of and/or polymer thereof.

2. Acids and alkalis- The acids used are sulphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:—

Ammonium hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium phosphate
Ammonium sulphate

Ammonium sulphite, Bisulphite, Metasulphite

Where the sulphite compounds are used, they are one or more of the following:—

Sulphurous acid, Potassium, Sodium or ammonium Sulphite or Bisulphite.

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solids basis, except metallic impurities.

TABLE 1 - ROUTINE TEST REQUIREMENTS FOR CARAMEL

Sl. No.	*Characteristic*	*Type I Plain*	*Type II CausticSulphite*	*Type III AmmoniaProcess*	*Type IV Sulphite Ammonia*
1.	Solid content, per cent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity,	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammonical nitrogen per cent by mass, max.	0.01	0.01	0.4	0.5
4.	4-Methylimidazole	-	-	Max.300 mg/kg & Max.200 mg/kg on equivalent colour basis	Max.1000 mg/kg & Max.250 mg/kg on equivalent colour basis
5.	Lead (as Pb), mg/kg, Max.	5	5	5	5
6.	Arsenic(as AS) mg/kg.	3	3	3	3

Note: Requirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl. No. (2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

Type Test

The material shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE 2 - TYPE TEST REQUIREMENTS FOR CARAMEL

Sl. No.	Characteristic	Type I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1.	Total sulphur Per cent by mass.	Max 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	--	Max. 0.2%	--	Max.0.5%
3.	Total nitrogen, Per cent by mass	Max.0.1	Max.0.2	1.3-6.8	0.5-7.5
4.	Heavy metals mg/kg (Max.)	25	25	25	25
5.	2-Acetyl-4- tetra hydroxy butylimidazole (THI)	--	--	Max.40 mg/kg & Max. 25 mg/kg on an equivalent colour basis	--
6.	Mercury (as Hg) mg/kg, Max.	0.1	0.1	0.1	0.1
7.	Copper (as Cu) mg/kg, Max.	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

8. ANNATTO

Class	Carotenoids
Code Number	Cl (1975) No. 75120', Cl (1975) Natural Orange 4 EEC No.E-160 b
Chemical Name	Annatto extract in oil contains several coloured components, the major single one being bixin which may be present in both Cis and Trans forms. Thermal degradation products of bixin may also be present.
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both cis and trans forms may be present
Chemical Formula	Bixin C_{25} H_{30} O_4 Norbixin C_{24} H_{28} O_4
Molecular Weight	Bixin 394.50 Norbixin 380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and

(b) Solution in water for use in cheese and other food products.

General

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic

conditions in licensed premises.

(1) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:—

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15°C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 per cent shall be a clear solution.

Colour

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v) when measured in a Lovibond Tintometer with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

or be not less than the colour of the following inorganic solution at a liquid depth of one centimeter which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal day light:

Potassium Bichromate	0.320 g
Cobalt ammonium sulphate ($CoSO_4$ $(NH_4)_2$ SO_4 $6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1.84	2ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and Other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 per cent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature

of 15°C. Colour

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000 (m/v) measured in a 1-cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:

TABLE

Requirement for Annatto

Sl. No.	*Characteristic*	*Requirement*
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, per cent by mass, Min.	0.24
	(b) Water-soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3
3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metal, mg/kg, Max.	40

9-RIBOFLAVIN

Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280°C with decomposition.

Solubility-slightly soluble in water, more soluble in saline solution and in a 10 per cent (w/v) solution of urea, sparingly soluble in alcohol, practically insoluble in chloroform and in solvent ether and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, Lactoflavin and Lactroflavine
Color	Yellow to orange-yellow
Class	Isoalloxazine
Chemical Name	6.7-dimethyl-9-(d-1-ribityl)- isoalloxazine
Empirical formula	$C_{17}H_{20}N_4O_6$
Molecular Weight	376.38

Identification.-A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescence which disappears on the addition of sodium dithionite and mineral acids or alkalies.

Spectrophotometry-Absorption maxima of aqueous solution shall be at 220 to 225, 266, 371 and 444 mu.

Specific Rotation-It shall be determined in a 0.5 per cent w/v solution in a mixture of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from carbonate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105oC, shall be,- 122oC.

The material shall have minimum purity of 97.0 per cent.

Maximum limit of metallic impurities shall be:—

Arsenic (as As)	5 ppm
Lead (as Pb)	20 ppm.

10 - PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	Cl Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC Serial No.E 124
Colour of the 0.1 Percent (m/v) solution in distilled water	Red
Colour Index Number (1975)	No. 16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) naphthol-6, 8-disulphonic acid
Empirical formula	C_{20} H_{11} N_2 O_{10} S_3 Na_2
Molecular Weight	604.5
Solubility	Soluble in water. Sparingly soluble in Ethanol

The material shall conform to the requirements prescribed in Table below:—

TABLE

Requirements for Ponceau 4R

Sl. No.	Characteristic	Requirement
1.	Total dye content, corrected for Sample dried at 105±1°C for 2 hours, per cent by mass, Min.	85
2	Loss on drying at 135°C, percent by mass, Max. and Chlorides and Sulphates expressed as sodium salt, per cent by mass, Max	18
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass. Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, per cent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg, Max.	3
9.	Heavy metals, mg/kg, Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.;

11-CARMOISINE

Common Name	Carmoisine
Synonyms	Azorubine, C.I. Food Red 3, EEC. Serial No.E 122
Colour of the 0.1 Percent (m/v)	Red

solution in distilled water	
Colour Index Number (1956)	No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphthylazo)-1-hydroxy-naphthalene-4-sulphonic acid
Empirical formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular Weight	502. 44

General Requirements: The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:—

TABLE

Requirements for Carmoisine

Sl. No.	*Characteristic*	*Requirement*
1.	Total dye content, corrected for Sample dried at 105±1°C for 2 hours, per cent by mass, Min.	87
2.	Loss on drying at 135°C, percent by mass, Max. and Chlorides and Sulphates expressed as sodium salt, per cent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass. Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, per cent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg, Max.	3
9.	Heavy metals, mg/kg, Max.	40

12-SYNTHETIC FOOD COLOUR - PREPARATION AND MIXTURES.

Colour Preparation

A Preparation containing one or more of the permitted synthetic food colours conforming to the prescribed standard alongwith diluents and/or filler materials and meant to be used for imparting colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous/foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:—

1. Potable water
2. Edible common salt
3. Sugar
4. Dextrose Monohydrate

5. Liquid glucose
6. Sodium sulphate
7. Tartaric acid
8. Glycerine
9. Propylene glycol
10. Acetic acid, dilute
11. Sorbitol
12. Citric acid
13. Sodium carbonate and sodium hydrogen carbonate
14. Lactose
15. Ammonium, sodium and potassium alginates
16. Dextrins
17. Ethyl acetate
18. Starches
19. Diethyl ether
20. Ethanol
21. Glycerol mono, di and tri acetate
22. Edible oils and fats
23. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28. Gelatin
29. Pectin

Colour Mixtures

A mixture of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting colour to food.

It may contain permitted preservatives and stabilizers.

General Requirements- For Colour Preparation & Colour Mixture. The total Synthetic dye content, per cent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparation	+15 per cent
		-5 per cent
(b)	Solid preparations	±7.5 per cent

The limits of impurities shall be as prescribed in Table below:—

TABLE

Limits for Impurities

1.	Water insoluble matter, per cent by mass, Max. (on dry basis), Max.	1.0
2.	Lead, (as Pb), mg/kg, Max.	10
3.	Arsenic, (as As) mg/kg, Max.	3.0
4.	Heavy metals, mg/kg, Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthyl aminobenzidine, amino-4-diphenyl (xenylamine) or their derivatives and cyanides.

The total coal tar dye content percent by mass (m/v) in colour preparation or in mixture shall be declared on the lable of the container. In powder preparation, the declared value shall be on moisture free basis and in case of liquid preparation on ' as is basis' and the total dye content shall within ± 15 percent of the declared value. Colour preparation and colour mixture shall also comply with the following requirements namely: -

Sl. No.	*Characteristics*	*Requirements*
1	Water insoluble matter, percent by mass	Not more than 1.0
2	Arsenic as (As), parts per million	Not more than 3
3	Lead as (Pb) parts per million	Not more than 10

13 BRILLIANT BLUE FCF

Brilliant Blue FCF is hydroscopic in nature and its shade changes with different pH. Suitable precautions should, therefore, be taken in packing the colour.

Colour Brilliant Blue FCF is described below, namely:—

Common Name	Brilliant Blue FCF
Synonyms	C.l. Food Blue FD and C Blue No.1 Blue brilliant FCF
Colour	Blue
Colour Index Number (1975)	No.42900
Class	Triarymethane
Chemical Name	Disodium salt of alpha 4-(N- ethylbeta ulfobenzylamino)-phenyl] alpha [4-(N-ethyl-3 Sulfonatobenzylimino] cyclohexa-2, 5-dienylidene] toluene-2-sulfonate
Empirical formula	$C_{37}H_{34}N_2Na_2O_9S_3$
Molecular Weight	792.86

General requirements: The material shall conform to the requirement prescribed in Table below, namely:—

TABLE FOR BRILLIANT BLUE FCF

Sl. No.	*Characteristics*	*Requirements*
(i)	Total dye content, corrected for Sample dried at 105±1oC for 2 hours, percent by Mass, Minimum	85
(ii)	Loss on drying at 135^{o}C, and Chlorides and Sulphates expressed as sodium salt, per cent by Mass, Maximum	15
(iii)	Water insoluble matter, percent by Mass, Maximum	0.2
(iv)	Combined ether extracts, percent by Mass. Maximum	0.2
(v)	Subsidiary dyes, percent by Mass, Maximum	3
(vi)	Dye intermediates, percent by Mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-benzyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base, percent by Mass, Maximum	5
(vii)	Heavy metals, (as Pb), mg/kg, Maximum	40
	Lead, mg/kg, Maximum	10
	Arsenic, mg/kg, Maximum	3
	Chromium, mg/kg, Maximum	50

Note:- The material shall be free from aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

14. Fast Green FCF:

Fast Green FCF is hydroscopic in nature and its shade changes with different pH. Suitable precautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:—

Common Name	Fast Green FCF
Synonyms	C.l. Food Green 3, FD and C Green No.3, Vert Solide FCF
Class	Triary methane
Colour	Green
Colour Index	(1975) No.42053
Chemical Name	Disodium salt of 4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2, 5-cyclohexadienimine).
Empirical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86

Requirements: The material shall conform to the requirement prescribed in Table below, namely:—

TABLE FOR FAST GREEN FCF

Sl. No.	*Characteristic*	*Requirement*
(i)	Total dye content, corrected for Sample dried at 105±1°C for 2 hours, percent by mass, Minimum	85

(ii)	Loss on drying at 135°C, and, percent by Mass, Maximum and chlorides and Sulphates expressed as sodium salt, percent by mass, Maximum	13
(iii)	Water insoluble matter, percent by Mass, Maximum	0.2
(iv)	Combined ether extracts, percent by Mass. Max	0.2
(v)	Subsidiary dyes, percent by mass, Maximum	1.0
(vi)	Organic compound other than colouring matter uncombined intermediates and products of side reactions	
	(a) Sum of 2-, 3-, 4-formyl benzene sulphonic acid, sodium salts, percent by Mass, Maximum	0.5
	(b) Sum of 3- and 4-[ethyl (4-sulfophenyl) amino methyl benzene sulphonic acid, disodium salts, Percent by Mass, Maximum	0.3
	(c) 2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Maximum	0.5
	(d) Leuco base, percent by Mass, Maximum	5.0
	(e) Unsulphonated primary aromatic amines (calculated as aniline), percent by Mass, Maximum	0.01
(vii)	Lead, mg/kg, Maximum	10
(viii)	Arsenic, mg/kg, Maximum	3
(ix)	Chromium, mg/kg, Maximum	50
(x)	Mercury, mg/kg, Maximum	Absent
(xi)	Heavy metals, mg/kg, Maximum	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons and cyanides

15. Aluminium Lake of Sunset Yellow FCF- Food Yellow No.5 Aluminium Lake is a fine orange yellow water soluble, odourless powder. It is prepared by percipating Sunset Yellow FCF (conforming to specification under 10.02 of Appendix C of these Regulations on to a substratum of Alumina.

Chemical Name - Sunset Yellow FCF Aluminium Lake -6, hydroxy-5 (4-sulfophenlyazo)-2 Naphthalenesulphonic acid, Aluminium Lake.

Synonym - CI Pigment Yellow, 104, FD and C Yellow No. 6, Aluminium Lake (USA), Food Yellow No. 5 Aluminium Lake (Japan).

(1) Sunset yellow dye used in preparation of lake colour shall conform to specifications laid down under table 2 of these Regulations.

(2)	Pure dye content of Aluminium Lake weight by weight	not less than 17 percent
(3)	Substratum of Aluminium oxide	not more than 83 percent.
(4)	Aluminium content in the lake weight by weight	not more than 44 percent
(5)	Sodium chlorides and sulphates (as sodium salts)	not more than 2.0 percent
(6)	Inorganic matter (HCl insoluble)	not more than 0.5 percent
(7)	Lead (as Pb)	not more than 10 ppm

(8) Arsenic (as As) not more than 3 ppm

Alumina used in colour shall conform to following, namely:—

(a) Identity: Alumina (dried as aluminium hydroxide) is a white, odourless, tasteless, amorphous powder consisting essentially of Aluminium hydroxide ($Al_2O_3 \times H_2O$).

(b) Specifications: Alumina (dried aluminium hydroxide) shall conform to the following specifications, namely:-

(i)	Acidity or alkalinity	Agitate 1 gm with 25ml of water and filter. The filtrate shall be neutral to litmus paper
(ii)	Lead (as Pb)	not more than 10 parts per million
(iii)	Arsenic (as As)	not more than 1 parts per million
(iv)	Mercury (as Hg)	not more than 1 parts per million
(v)	Aluminium oxide (Al_2O_3)	not less than 50 percent

Solubility: Lakes are insoluble in most solvents. They are also insoluble in water in pH range from 3.5-9.0 but outside this range and lake substrate tends to dissolve releasing the captive dye.

[42][16. Beta-apo-8'-carotenal:

(1) Beta-apo-8'-carotenal in crystal form shall be deep violet with metallic luster, and in case of solution in oil, fat or organic solvents or water-dispersible forms including powder, granules or capsules, it shall be orange to red in colour and as described below, namely:-

Common Name	Beta-apo-8'-carotenal
Colour Index (DFG Lebensmittel)	Orange 8
INS No.	160e
C.A.S No.	1107-26-2
Chemical Name	Trans-beta-apo-8'-carotenal.
Empirical Formula	$C_{30}H_{40}O$
Molecular Weight	416.65

(2) Beta-apo-8'-carotenal shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as $C_{30}H_{40}O$ per cent. by weight, Min	96
2.	Sulphated ash, per cent. by weight, Max	0.1
3.	Melting range, 0^0C	136 - 140
4.	Arsenic , mg/kg, Max	3.0
5.	Lead, mg/kg, Max	2.0

17. Ethylester of Beta-apo-8'-carotenoic acid:

(1) Ethyl ester of Beta-apo-8'-carotenoic acid in crystal form shall be red and in case of solution in oil, fat or organic solvent or water-dispersible forms including, powder, granules or capsules, it shall be yellow to orange in colour and as described below, namely:-

Common Name	Ethyl ester of beta-apo-8'-carotenoic acid
Colour Index (DFG Lebensmittel)	Orange 9
INS No.	160f
C.A.S No.	1109-11-1
Chemical Name	Trans-beta-apo-8'-carotenoic acid, ethyl ester.
Empirical Formula	$C_{22}H_{44}O_8$
Molecular Weight	460.70

(2) Ethylester of Beta-apo-8'-carotenoic acid shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as $C_{22}H_{44}O_8$, per cent. by mass, *Min*	96
2.	Sulphated ash, per cent. by mass, *Max*	0.1
3.	Melting range, ^0C	134 - 138
4.	Arsenic , mg/kg, *Max*	3.0
5.	Lead, mg/kg, *Max*	2.0

18. Titanium dioxide:

(1) Titanium Dioxide shall be a white, tasteless, odourless, infusible powder and as described below, namely:-

Common Name	Titanium dioxide
INS No.	171
C.A.S No.	13463-67-7
Chemical Name	Titanium Dioxide
Empirical Formula	TiO_2
Molecular Weight	79.88

(2) Titanium dioxide shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as TiO_2, per cent. by mass, Min	99
2.	Loss on drying at 105 ^{0}C for 3 hours, per cent. by mass, Max	0.5
3.	Loss on ignition (at 800 ^{0}C), per cent. by mass. Max	0.5
4.	Acid soluble substances, per cent. by mass, Max	0.35
5.	Water soluble substances, per cent. by mass, Max	0.25
6.	Aluminium oxide and/or silicon dioxide (either singly or combined), per cent. by mass, Max	2.0
7.	Mercury, mg/kg, *Max*	1.0
8.	Antimony, mg/kg, *Max*	2.0
9.	Zinc, mg/kg, *Max*	50.0
10.	Arsenic, mg/kg, *Max*	1.0
11.	Lead, mg/kg, *Max*	2.0
12.	Barium compounds, mg/kg, *Max*	3.0
13.	Aluminium, mg/kg, *Max*	1.0]

[10][**3.2.2 Sweetener**:-

Amendment for insertion of new provision

[75][The sweeteners (as food additives) shall be classified as "Caloric sweeteners" and "Non–caloric sweeteners", defined as follows:

(a) Caloric sweeteners: Substances having greater than 2 percent of the caloric value of sucrose per equivalent unit of sweetening capacity. These include Sorbitol, Sorbitol syrup, Mannitol, Isomalt, Polyglycitol syrup, Maltitol, Maltitol syrup, Lactitol and Xylitol.

(b) Non-caloric sweeteners: Substances having less than 2 percent of the caloric value of sucrose per equivalent unit of sweetening capacity. These include Erythritol, Steviol glycoside, Thaumatin, Aspartame, Sucralose, Neotame, Acesulfame potassium, Aspartame-Acesulfame potassium salt and Saccharins.]

[Amendment in force from 26th July 2021; FBOs to comply with the provisions by 1st February 2022]

The standards for various sweeteners with characteristics are –

(1) Steviol Glycoside- White to light yellow powder, odorless or having a slight characteristic odor. About 200 - 300 times sweeter than sucrose. The product is obtained from the leaves of *stevia rebaudiana bertoni*. The leaves are extracted with hot water and the aqueous extract is passed through an adsorption resin to trap and concentrate the component steviol glycosides. The resin is washed with a solvent alcohol to release the glycosides and the product is re-crystallized from methanol or aqueous ethanol. Ion exchange resins may be used in the purification process. The final product may be spray-dried. Stevioside and rebaudioside A are the component glycosides of principal interest for their sweetening property. Associated glycosides include rebaudioside B, rebaudioside C, rebaudioside D, rebaudioside F, dulcoside A, rubusoside and steviolbioside which are generally present in preparations of steviol glycosides at levels lower than stevioside or rebaudioside A.

Synonyms	INS no. 960.
Chemical name	Stevioside:13-[(2-O-β-D-glucopyranosyl-β glucopyranosyl)oxy] kaur-16-en-18-oic acid, β-D-glucopyranosyl ester. Rebaudioside A: 13-[(2-O-β-D-glucopyranosyl-3-O-β-D-glucopyranosyl-β-D-glucopyranosyl)oxy]kaur-16-en-18-oic acid, β-D-glucopyranosyl ester.
Empirical formula	Stevioside: $C_{38}H_{60}O_{18}$ Rebaudioside A: $C_{44}H_{70}O_{23}$
Formula weight	Stevioside: 804.88 Rebaudioside A: 967.03.
Solubility	Freely soluble in water Stevioside and rebaudioside A The main peak in the chromatogram obtained by following the procedure in Method of Assay corresponds to either stevioside or rebaudioside A.
pH	Between 4.5 and 7.0 (1 in 100 solution).
[51][Assay/purity	Not less than 95 per cent. of the total of steviol glycosides on the dry weight basis]
[51][Total ash	Not more than 1 percent.]
Loss on drying	Not more than 6 percent (105°, 2h).

Residual solvents	Not more than 200 mg/kg methanol and not more than 5000 mg/kg ethanol (Method I in Vol. 4, General Methods, Organic Components, Residual Solvents).
Arsenic	Not more than 1 mg/kg Determine by the atomic absorption hydride technique (Use Method II to prepare the test (sample) solution).
Lead	Not more than 1 mg/kg Determine using an AAS/ICP-AES technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the methods described in Vol. 4 (under "General Methods, Metallic Impurities")]

[27][**3.2.3 Baker's Yeast**

1. The Baker's Yeast shall be of the following types:
   (i) Baker's Yeast, Compressed; and
   (ii) Baker's Yeast, Dried.

(i) Baker's Yeast (Compressed) shall be in the form of a block having creamy white colour, and odour characteristic of good baker's yeast (compressed) and a fine even texture. It shall not be slimy or mouldy and shall not show any sign of deterioration or decomposition. It shall be free from extraneous materials. Starch of an edible quality may, however, be added in a quantity not exceeding 7% by weight on dry basis. Permissible edible binders and fillers may be added. It shall break sharply on bending. The yeast blocks shall be stored at temperature between 1 to 5^0C.

(ii) Baker's Yeast (Dried) shall be in the form of small powder granules, pellets or flakes. It shall have an odour characteristic of good baker's yeast (dried). It shall not be mouldy and shall not show any sign of deterioration or decomposition. It shall be free from adulterants and other extraneous materials. Starch of an edible quality may, however, be added in a quantity not exceeding 10 % by weight of the material. The yeast shall be stored in a cool and dry place at a temperature not more than 25^0C.

Baker's Yeast shall conform to the following standards namely:-

Characteristics	*Requirements for*	
	Baker's yeast Compressed	*Baker's Yeast Dried*
Moisture, percent by weight, max	73	8
Dispersibility in water	To satisfy the test*	To satisfy the test*
Fermenting power*, Min	1000	350

Dough-raising capacity	To satisfy the test*	To satisfy the test*

* As per method prescribed in IS: 1320.

Note: These parameters shall be tested within 24 hours of production of yeast.

2. Food Additives

Only those food additives permitted under the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 shall be used.

3. Hygiene

The product shall be prepared and handled in accordance with the guidelines provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulation, 2011 and such guidance as provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

4. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

The products covered in this standard shall conform to the Microbiological Requirements given in Appendix B of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

5. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

3.2.4 Lactic Acid (Food Grade) (INS 270)

1. Lactic acid shall be yellowish to colourless syrupy liquid with an acidic taste and no odour. It shall be obtained by lactic fermentation of sugars or prepared synthetically. It shall be miscible in water and ethanol. It shall give positive test for lactate. It shall conform to the following specifications:

Characteristics	*Requirement*
Purity ($C_3H_6O_3$), % by weight of the labelled concentration	Not less than 95.0%
Sulphated ash, % by weight, Max	0.1
Chlorides, % by weight, Max	0.2
Sulphates (as SO_4), % by weight, Max	0.25
Citric, oxalic, phosphoric and tartaric acids	Conform to test*
Sugars	Conform to test*
Readily carbonizable substances	Conform to test*
Cyanide	Conform to test*
Iron, mg/kg, Max	10
Lead mg/kg, Max	2

*As per method prescribed in IS: 9971.

2. Hygiene

The product shall be prepared and handled in accordance with the guidelines provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidance as provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

3. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.

4. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

3.2.5 Ascorbic Acid (Food Grade) (INS 300)

1. Ascorbic acid shall be a white or almost white odourless crystalline solid. Its melting range is 190°C to 192°C with decomposition. The material is freely soluble in water and sparingly soluble in ethanol and insoluble in ether. It shall conform to the following standards:

Characteristic	*Requirement*
Purity as $C_6H_8O_6$ % by weight , Min	99
Loss on drying over sulphuric acid for 24 hours, % by weight, Max	0.4
Sulphated ash, % by weight, Max	0.1
Specific rotation, when determined in a 2 % (m/v) solution in water at 20^0C	$+20.5^0$ to $+21.5^0$
pH of 2 % (m/v) solution	2.4 - 2.8
Lead mg/kg, Max	2

2. Hygiene

The product shall be prepared and handled in accordance with the guidelines provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011, and such guidance as provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

3. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

4. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

3.2.6 Calcium Propionate (Food Grade) (INS 282)

1. Calcium propionate shall be in the form of white crystals or crystalline solid possessing a faint odour of propionic acid. The material shall be freely soluble in water. It shall conform to the following standards:

Characteristic	**Requirement**
Purity as $C_6H_{10}O_4Ca$, % by weight on dry basis, Min	98
Moisture, % by weight, Max	5.0
Matter insoluble in water, % by weight, Max	0.3
Iron (as Fe), mg/kg, Max	50
Fluoride, mg/kg, Max	10
Lead mg/kg, Max	5

Characteristic	Requirement
Magnesium (as MgO)	To pass the test (about 0.4%)
pH of the 10 %(m/v) solution at 25 $\pm$ 2^0C	7-9

2. Hygiene

The product shall be prepared and handled in accordance with the guideline provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulation, 2011, and such guidance as provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

3. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

4. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

3.2.7 Sodium Metabisulphite (Food Grade) (INS 223)

1. Sodium Metabisulphite shall be colourless crystals or white to yellowish crystalline powder having an odour of sulphur dioxide. The material is soluble in water but insoluble in ethanol. It shall conform to the following standards:

Characteristics	*Requirement*
Purity	
(a) As $Na_2S_2O_5$, % by weight , Min	95
(b) As SO_2, % by weight, Min	64
Water insoluble matter, % by weight, Max	0.05
Thiosulphate, % by weight, Max	0.01
Iron mg/kg, Max	5
Selenium (as Se), mg/kg, Max	5
Lead mg/kg, Max	2
pH	Acidic to litmus

2. Hygiene

The product shall be prepared and handled in accordance with the guideline provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulation,

2011 and such guidance as provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

3. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

4. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.

3.2.8 Potassium Metabisulphite (Food Grade) (INS 224)

1. Potassium Metabisulphite shall be white or colourless, free flowing crystals, crystalline powder or granules usually having an odour of sulphur dioxide. It gradually oxidizes in air to sulphate. The material is soluble in water but insoluble in ethanol. It shall conform to the following standards:

Characteristic	*Requirement*
Purity, as $K_2S_2O_5$, % by weight , Min	90
Water insoluble matter, %by weight, Max	0.05
Thiosulphate, % by weight, Max	0.1
Iron, mg/kg, Max	5
Selenium (as Se), mg/kg, Max	5
Lead mg/kg, Max	2
pH	Acidic to litmus

2. Hygiene

The product shall be prepared and handled in accordance with the guidelines provided in Schedule 4, Part-II of the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 and such guidance provided from time to time under the provisions of the Food Safety and Standards Act, 2006.

3. Contaminants, Toxins and Residues

The product covered in this standard shall comply with the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

4. Packaging and Labelling

The products shall comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011.]

[42][**3.2.9. Preservatives:**

1. Sodium benzoate:

(1) Sodium benzoate shall be a white, almost odourless, crystalline powder or flakes and as described below, namely:-

Common Name	Sodium benzoate
INS No.	211
C.A.S No.	532-32-1
Chemical Name	Sodium salt of benzene carboxylic acid, and sodium salt of phenyl carboxylic acid
Empirical Formula	$C_7H_50_2Na$
Molecular Weight	144.11

(2) Sodium benzoate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity, expressed as $C_7H_50_2Na$, per cent. by mass, Min	99.0
2.	Melting range of liberated benzoic acid	121.5°C- 123.5°C
3.	Moisture, per cent. by mass, Max	1.5
4.	Acidity or alkalinity	shall conform to test as per BIS standard
5.	Readily carbonizable substances	shall conform to test as per BIS standard
6.	Readily oxidizable substances	shall conform to test as per BIS standard
7.	Chlorinated organic compounds	shall conform to test as per BIS standard
8.	Arsenic, mg/kg, *Max*	3.0
9.	Lead, mg/kg, Max	2.0

2. Benzoic acid:

(1) Benzoic acid shall be in the form of white crystals, scales or needles and as described below, namely:-

Common Name	Benzoic acid
INS No.	210
C.A.S No.	65-85-0
Chemical Name	benzene carboxylic acid, and phenyl carboxylic acid
Empirical Formula	$C_7H_60_2$
Molecular Weight	122.12

(2) Benzoic acid shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity, as $C_7H_60_2$, per cent. by mass, Min	99.5
2.	Melting range	121.5°C - 123.5°C
3.	Sulphated ash, per cent. by mass, *Max*	0.05
4.	Readily carbonizable substances	shall conform to test as per BIS standard
5.	Readily oxidizable substances	shall conform to test as per BIS standard
6.	Loss on drying (for 3 hours over sulphuric acid or silica gel at ambient temperature in a dessicator) per cent. by mass, *Max*	0.5
7.	Chlorinated organic compounds	shall conform to test as per BIS standard
8.	Arsenic, mg/kg, *Max*	3.0
9.	Lead, mg/kg, Max	2.0

3. Potassium nitrate:

(1) Potassium nitrate shall be colourless, odourless and salty to taste and may be in the form of transparent prisms or white granules or crystalline powder and as described below, namely:-

Common Name	Potassium nitrate
INS No.	252
C.A.S No.	7757-79-1

Chemical Name	Potassium nitrate
Empirical Formula	KNO_3
Molecular Weight	101.11

(2) Potassium nitrate shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity, as KNO_3, per cent. by mass, Mi*n*	99
2.	Moisture per cent. by mass, *Max*	1
3.	Matter insoluble in water	Shall pass the test as per BIS standard
4.	Chlorates	Shall pass the test as per BIS standard
5.	Sulphates (as K_2SO_4), per cent. by mass, Max	0.10
6.	Arsenic, mg/kg, *Max*	3.0
7.	Lead, mg/kg, Max	2.0
8.	Nitrite, mg/kg, *Max*	20.0

4. Sorbic acid:

(1) Sorbic acid shall be colourless needles or white free flowing powder, having a slight characteristic odour and as described below, namely:-

Common Name	Sorbic acid
INS No.	200
C.A.S No.	110-44-1
Chemical Name	Sorbic acid; trans, all trans 2, 4-hexadienoic acid.
Empirical Formula	$C_6H_8O_2$
Molecular Weight	112.13

(2) Sorbic acid shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)

1	Purity, as $C_6H_8O_2$, per cent. by mass(on dry basis), *Min*	99
2	Moisture, per cent. by mass, *Max*	0.5
3	Sulphated ash, per cent. by mass, Max	0.2
4	Aldehydes, per cent. by mass, Max	0.1
5	Melting range, ^0C	132 - 135
6	Arsenic, mg/kg, *Max*	3.0
7	Lead, mg/kg, Max	2.0

5. Potassium nitrite:

(1) Potassium nitrite shall be in the form of small white or yellowish deliquescent granules or cylindrical sticks and as described below, namely:-

Common Name	Potassium nitrite
INS No.	249
C.A.S No.	7758-09-0
Chemical Name	Potassium nitrite
Empirical Formula	KNO_2
Molecular Weight	85.11

(2) Potassium nitrite shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity, as (KNO_2), on dry basis, per cent. by mass, *Min*	97
2.	Loss on drying when dried over silica gel for four hours, per cent. by mass, Max	1
3.	Arsenic, mg/kg, *Max*	3.0
4.	Lead, mg/kg, Max	2.0

6. Sodium propionate:

(1) Sodium propionate shall be colourless and in the form of transparent crystals or granular crystalline powder and shall be odourless or with a faint acetic butyric odour and as described below, namely:-

Common Name	Sodium propionate
INS No.	281
C.A.S No.	137-40-6
Chemical Name	Sodium Propionate
Empirical Formula	C_3H5O_2Na
Molecular Weight	96.06

(2) Sodium propionate shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as $C_3H_5O_2Na$, per cent. by mass, on dry basis, *Min*	99
2.	Moisture, per cent. by mass, *Max*	1
3.	Matter insoluble in water, per cent. by mass, Max	0.1
4.	Iron, mg/kg, *Max*	30
5.	Arsenic, mg/kg, *Max*	3.0
6.	Lead, mg/kg, Max	5.0

7. Sulphur dioxide:

(1) Sulphur dioxide shall be a colourless, non-flammable gas, with a strong, pungent suffocating odour and as described below, namely:-

Common Name	Sulphur dioxide
INS No.	220
C.A.S No.	7446-09-5
Chemical Name	Sulphur dioxide, sulphurous acid anhydrate
Empirical Formula	SO_2
Molecular weight	64.007

(2) Sulphur dioxide shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity (as SO2), per cent. by mass, on dry basis, Min	95

2.	Non-volatile residue	shall conform to test as per BIS Standard
3.	Moisture, per cent. by mass, Max	0.05
4.	Selenium, mg/kg, Max	20.0
5.	Arsenic, mg/kg, Max	3.0
6.	Lead, mg/kg, Max	5.0

3.2.10 Acidity regulator:

1. Ammonium hydrogen carbonate:

(1) Ammonium hydrogen carbonate shall be in the form of white crystals or fine white crystalline powder and as described below, namely:-

Common Name	Ammonium bicarbonate
INS No.	503(ii)
C.A.S No.	1066-33-7
Chemical Name	Ammonium hydrogen carbonate
Empirical Formula	CH_5NO_3
Molecular Weight	79.06

(2) Ammonium hydrogen carbonate shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Ammonium Hydrogen Carbonate, per cent. by mass, *Min*	98.0
2.	Chlorides (as Cl), per cent. by mass, *Max*	0.2
3.	Sulphates (as SO_4), per cent. by mass, *Max*	0.1
4.	Non-volatile matter, per cent. by mass, *Max*	0.1
5.	Iron (as Fe), per cent. by mass, Max	0.004

6.	Non-volatile matter, per cent. by mass, *Max*	0.1
7.	Arsenic, mg/kg, *Max*	0.6
8.	Lead, mg/kg, Max	2.0
9.	Copper, mg/kg, *Max*	5.0

2. Trisodium citrate:

(1) Trisodium citrate shall be in the form of colourless crystals or white crystalline powder and as described below, namely:-

Common Name	Trisodium citrate
INS No.	331 (iii)
C.A.S No.	68-04-2
Chemical Name	Trisodium citrate
Empirical Formula	$C_6H_5Na_3O_7.2H_2O$
Molecular Weight	294.10

(2) Trisodium citrate shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity, (as$C_6H_5Na_3O_7$), on dry basis, per cent. by mass, *Min*	99
2.	Moisture, per cent. by mass, *Max* a) Anhydrous b) Dehydrate	 1 13
3.	Alkalinity	shall pass the test as per BIS standard
4.	Arsenic, mg/kg, *Max*	3.0
5.	Lead, mg/kg, Max	2.0

3. Fumaric acid:

(1) Fumaric acid shall be in the form of white, odourless granules or crystalline powder with characteristic acid taste and as described below, namely:-

Common Name	Fumaric acid
INS No.	297
C.A.S No.	110-17-8
Chemical Name	trans-butenedioic acid, and trans-1,2 ethylene dicarboxylic acid
Empirical Formula	$C_4H_4O_4$
Molecular Weight	116.07

(2) Fumaric acid shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as $C_4H_4O_4$, per cent. by mass, (on anhydrous basis), Min	99.5
2.	Moisture, per cent. by mass, Max	0.5
3.	Sulphated ash, per cent. by mass, Max	0.1
4.	Maleic acid, per cent. by mass, Max	0.1
5.	Arsenic, mg/kg, Max	3.0
6.	Lead, mg/kg, Max	2.0

4. L (+) - Tartaric acid:

(1) L (+) - Tartaric acid shall be either in the form of colorless or translucent crystals, or a white, fine to granular, crystalline powder and shall be odourless, acidic in taste and stable in air and as described below, namely:-

Common Name	L (+) - Tartaric acid
INS No.	334
C.A.S No.	87-69-4
Chemical Name	Tartaric acid - 2,3-dihydroxy succinic acid
Empirical Formula	$C_4H_6O_6$
Molecular Weight	150.09

(2) L(+) – Tartaric acid shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as ($C_4H_6O_6$), per cent. by mass (on dry basis), Min	99.5
2.	Loss on drying, per cent. by mass, on drying at 105 ^{0}C for 3 hours over P_3O_4,Max	0.5
3.	Sulphated ash, per cent. by mass, Max	0.1
4.	Oxalate	shall pass the test as per BIS standard
5.	Sulphate	0.05
6.	Arsenic, mg/kg, *Max*	3.0
7.	Lead, mg/kg, Max	2.0

5. Dicalcium phosphate:

(1) Dicalcium phosphate shall be white crystals or granules or granular powder or powder and as described below, namely:-

Common Name	Calcium hydrogen phosphate, dibasic calcium phosphate
INS No.	341 (ii)
C.A.S No.	7757-93-9
Chemical Name	Secondary calcium phosphate, calcium hydrogen orthophosphate, calcium hydrogen phosphate.
Empirical Formula	$CaHP0_4$ (Anhydrous) $CaHPO_4$. $2H_2O$ (Dihydrate)
Molecular Weight	136.06 (Anhydrous) 172.09 (Dihydrate)

(2) Dicalcium phosphate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as (CaHP04), after drying at 200 0C for 3 h, per cent. by mass	98 to 102
2.	Loss on drying, per cent. by mass, after drying at 200 ^{0}C for 3 h	
	a) Anhydrous, Max	2
	b) Dihydrate	18 to 22

3.	Fluoride, mg/kg, *Max*	50.0
4.	Arsenic, mg/kg, *Max*	3.0
5.	Lead, mg/kg, Max	4.0

6. Phosphoric Acid:

(1) Phosphoric Acid shall be a clear, colourless, odourless viscous liquid and as described below, namely:-

Common Name	Phosphoric Acid
INS No.	338
C.A.S No.	7664-38-20
Chemical Name	Phosphoric acid, orthophosphoric acid
Empirical Formula	H_3PO_4
Molecular Weight	98.0

(2) Phosphoric acid shall conform to the requirements specified in the table below:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as H_3PO_4, per cent. by mass, Min	85
2.	Nitrates, mg/kg, Max	5
3.	Volatile acids, mg/kg, Max	10
4.	Chlorides, mg/kg, Max	200
5.	Sulphates per cent. by mass, Max	0.15
6.	Chloride, mg/kg, Max	200.0
7.	Fluoride, mg/kg, *Max*	10.0
8.	Arsenic, mg/kg, *Max*	2.0
9.	Lead, mg/kg, Max	4.0

7. Citric Acid:

(1) Citric Acid shall be white or colourless, odourless, crystalline solid which in monohydrate form effloresces in dry air and as described below, namely:-

Common Name	Citric Acid
INS No.	330
C.A.S No.	77-92-9(anhydrous) 5949-29-1 (monohydrate)

Chemical Name	2-hydroxyl-l,2,3-propanetricarboxylic acid; B-hydroxytricarboxylic acid.
Empirical Formula	$C_6H_80_7$ (anhydrous) $C_6H_8O_7.H_2O$(monohydrate)
Molecular Weight	192.13 (anhydrous) 210.15 (monohydrate)

(2) Citric acid shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirement
(1)	(2)	(3)
1.	Water insoluble matter, ppm, Max	30
2.	Chloride (as Cl), ppm, Max	5
3.	Calcium, ppm, Max	25
4.	Tridodecylamine, ppm, Max	0.1
5.	Arsenic, mg/kg, Max	3.0
6.	Lead, mg/kg, Max	0.5

8. Malic acid:

(1) Malic acid shall be a white to nearly white crystalline powder or granules having a strong acid taste and as described below, namely:-

Common Name	Malic Acid
INS No.	296
C.A.S No.	6915-15-7
Chemical Name	DL-malic acid and hydroxyl succinic acid
Empirical Formula	$C_4H_6O_5$
Molecular Weight	134.09

(2) Malic acid shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)

1	Purity as $C_4H_6O_5$ (on dry basis), per cent. by mass, Min	99.0
2	Moisture, per cent. by mass, Max	0.3
3	Residue on ignition (on dry basis), per cent. by mass, Max	0.1
4	Water insolube matter, per cent. by mass, Max	0.1
5	Fumaric acid, per cent. by mass, Max	1.0
6	Maleic acid, per cent. by mass, Max	0.05
7	Lead, mg/kg, Max	2.0
8	Arsenic, mg/kg, *Max*	3.0

9. Sodium Hydroxide:

(1) Sodium Hydroxide may be in the form of white or nearly white pellets, flakes, sticks, fused masses or in any other form and as described below, namely:-

Common Name	Caustic soda, lye, sodium hydrate
INS No.	524
C.A.S No.	1310-73-2
Chemical Name	Sodium hydroxide
Empirical Formula	NaOH
Molecular Weight	40.0

(2) Sodium Hydroxide shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Purity as NaOH, per cent. by mass, Min	95
2	Carbonate, per cent. by mass as Na_2CO_3, Max	3
3	Lead, mg/kg, Max	2.0
4	Mercury, mg/kg, Max	1.5

3.2.11 Gelling agent or Thickener or stabilizer:

1. Sodium alginate:

(1) Sodium Alginate shall be white, yellowish or pale brown fibrous or granular powder and as described below, namely:-

Common Name	Sodium alginate
INS No.	401
C.A.S No.	9005-38-3
Chemical Name	Sodium alginate
Empirical Formula	$(C_6H_7O_6Na)_n$
Equivalent Weight (average)	222.00

(2) Sodium alginate shall conform to the requirements specified in the table below, namely:-

Table

SI.No.	Characteristic	Requirements
(1)	(2)	(3)
1	Purity as $(C_6H_7O_6Na)$, per cent. by mass	91 to 106
2	Moisture, per cent. by mass, *Max*	15
3	Matter insoluble in water, per cent. by mass, *Max*	1
4	Viscosity of a one per cent. solution (m/m), in centipoise, Min	30
5	Ash (on dry basis), per cent. by mass, Max	18 to 27
6	Acid insoluble ash (on dry basis), per cent. by mass, Max	0.5
7	Lead, mg/kg, *Max*	5.0
8	Arsenic, mg/kg, *Max*	3.0

2. Sodium Carboxymethyl Cellulose:

(1) Sodium Carboxymethyl Cellulose shall be a white or slightly yellowish powder consisting of very fine particles, fine granules or fine fibers with hygroscopic nature and as described below, namely:-

Common Name	Sodium Carboxymethyl Cellulose
INS No.	466
C.A.S No.	9004-32-4
Chemical Name	Sodium salt of carboxy methyl ether of cellulose.
Empirical Formula	$[C_6H_7O_2(OH)\ x\ (OCH_2COONa)y]n$

	x = 2.00 to 2.80 y = 0.20 to 1.00 = degree of substitution or 3.00 - x x + y = 3.00 Structural units with degree of substitution of 0.20 178.14 Mono substituted structural units: 242.16
Molecular Weight	178.14

(2) Sodium Carboxymethyl Cellulose shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Purity, as sodium carboxy methyl cellulose per cent. by mass, Min	99.5 (Purity is determined by subtracting from 100, the per cent.age of combined sodium chloride and free glycolate)
2	Degree of substitution, Max	0.20 to 1.00
3	Loss on drying, per cent. by mass, Max	10
4	Sodium chloride, on dry basis, per cent. by mass, Max	0.5
5	Free glycolate, on dry basis, per cent. by mass, Max	0.1
6	pH of 1 per cent. colloidal solution	6 to 8.5
7	Combined sodium chloride and free glycolate (on dry basis), per cent. by mass, Max	0.5 (Obtained by the simple addition of values obtained a SI No. (4 & 5).
8	Lead, mg/kg, Max	2.0
9	Arsenic, mg/kg, Max	3.0

3. Sodium Carboxymethyl Cellulose, enzyme hydrolysed:

(1) Sodium Carboxymethyl Cellulose, Enzyme hydrolysed shall be a white or slightly yellowish or greyish, odourless, slightly hygroscopic granular or fibrous powder and as described below, namely:-

Common Name	Enzymatically hydrolyzed sodium carboxy methyl cellulose
INS No.	469
Chemical Name	Carboxymethyl cellulose, sodium, partially enzymatically hydrolyzed
Empirical Formula	$[C_6H_7O_2(OH)_x(OCH_2COONa)_y]_n$ x = 1.50 to 2.80 y = 0.20 to 1.50 = degree of substitution or 3.00 - x x + y = 3.00 Structural units with degree of substitution of 0.20 178.14 Mono substituted structural units: 242.16
Molecular Weight	178.14

(2) Sodium Carboxymethyl Cellulose, enzyme hydrolysed shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Loss on drying, per cent., Max	12
2	pH	6 - 8.5
3	Sodium chloride and sodium glycolate, per cent., Max	0.5
4	Degree of substitution	0.2 - 1.5
5	Residual enzyme activity	shall pass test as per BIS standard
6	Lead, mg/kg, Max	3.0

4. Agar

(1) Agar shall be a dried hydrophylic, colloidal polygalactoside extracted from *Gelidiella* species and *Gracilaria* species or any other red algae species of the class *Rhodophyceae* and may be in bundles consisting of thin, membranous strips or in cut, flaked, granulated, or powdered form and shall be white to pale yellow in colour and as described below, namely:-

Common Name	Agar-agar, gelose, Japanese isinglass
INS No.	406
C.A.S No.	9002-18-0

(2) Agar shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Water absorption	shall pass the test as per BIS standards
2	Moisture, per cent. by mass, Max	20
3	Total ash, per cent. by mass, Max	6.5
4	Acid insoluble ash, per cent. by mass, Max	0.5
5	Gelatin	shall pass the test as per BIS standards
6	Insoluble matter, per cent. by mass, Max	1
7	Starch and dextrins	shall pass the test as per BIS standards
8	Arsenic, mg/kg, Max	3.0
9	Lead, mg/kg, Max	5.0

5. Gum Arabic or Acacia Gum:

(1) Acacia gum,-

(a) shall be a dried gummy exudation obtained from the stems and branches of *Acacia senegal* (L) wild or *Acacia seyal* (L) wild, or other related species of Acacia (Family Leguminosae);

(b) may contain extraneous matter like pieces of bark, but which shall be removed before use in foods;

(c) Acacia gum (*A. senegal*) shall be pale white to orange brown solid, which breaks with a glassy fracture;

(d) the best grades shall be in the form of whole, spheroidal tears of varying sizes with a matt surface texture and when ground, the pieces are paler and have a glassy appearance;

(e) shall also be available in the form of white to yellowish-white flakes, granules, powder, roller dried or spray dried material; and

(f) as described below, namely:-

Common Name	Acacia gum
INS No.	414
C.A.S No.	9000-01-5

(2) Gum Arabic shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Loss on drying, per cent. by mass, Max a) Granular material b) Spray dried material	 15 10
2	Total ash, per cent. by mass, Max	4
3	Acid insoluble ash, per cent. by mass, Max	0.5
4	Insoluble matter, per cent. by mass, Max	1
5	Starch and dextrins	shall pass the test as per BIS standard
6	Tannin-bearing gums	shall pass the test as per BIS standard
7	Salmonella per g, Max	Negative
8	Escherichia coli per g, Max	Negative
9	Arsenic, mg/kg, *Max*	2.0
10	Lead, mg/kg, Max	3.0

6. Tragacanth gum:

(1) Tragacanth gum,-

(a) in raw form, is dried gummy exudation obtained from *Astragalus strobiliferus* or other species of *Astragalus* (Fam, Leguminosae) which is a white to yellowish-white and nearly odourless powder;

(b) in powdered form shall be in white to yellowish-white colour;

(c) in un-ground form, is flattened or lamellated or frequently curved fragments or straight or spirally tested linear pieces from 0.5 to 2.5 mm in thickness and white to pale yellow in colour, translucent, horny in texture and breaks with short fracture, odourless, insipid mucilaginous in taste and as described below, namely:-

Common Name	Tragacanth gum
INS No.	413
C.A.S No.	9000-65-1

(2) Tragacanth gum shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirement
(1)	(2)	(3)
1	Loss on drying, per cent. by mass, Max	10
2	Total ash, per cent. by mass, Max	4
3	Acid insoluble ash, per cent. by mass, Max	0.5
4	Starch and dextrins	shall pass the test as per BIS standard
5	Tannin-bearing gums	shall pass the test as per BIS standard
6	Viscosity of a 1 per cent. solution, Min	250
7	Karaya gum test, per cent. by mass, Min	shall pass the test as per BIS standard
8	*Salmonella* per g, Max	Negative
9	*Escherichia coli* per g, Max	Negative
10	Lead, mg/kg, *Max*	2.0
11	Arsenic, mg/kg, *Max*	3.0

7. Gum Ghatti:

(1) Gum Ghatti is a dried gummy exudation obtained from *Anogeissus latifolia* Wall (family Combretaceae) consisting mainly of a calcium salt (which on occasions occur as a magnesium salt) of high molecular weight polysaccharide which on hydrolysis yields arabinose, galactose, mannose, xylose and glucuronic acid and shall be amorphous translucent rounded tears with a glassy texture,

light brown to dark brown in colour with lighter colour giving better grade of material and powdered material shall have grey to reddish grey colour, and as described below, namely:-

Common Name	Indian gum, ghatti gum, gum ghati
INS No.	419
C.A.S No.	9000-28-6

(2) Gum Ghatti shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Loss on drying, per cent. by mass, Max	14
2	Total ash, per cent. by mass, Max	6
3	Acid insoluble ash, per cent. by mass, Max	0.5
4	Insoluble matter, per cent. by mass, Max	10
5	Starch and dextrins	shall pass the test as per BIS standard
6	Tannin-bearing gums	shall pass the test as per BIS standard
7	Salmonella per g, Max	Negative
8	Escherichia coli per g, Max	Negative
9	Lead, mg/kg, *Max*	5.0
10	Arsenic, mg/kg, *Max*	3.0

8. Calcium Alginate:

(1) The calcium salt of alginic acid shall be a white to yellowish fibrous or granular powder and as described below, namely:-

Common Name	Calcium Alginate
INS No.	404
C.A.S No.	9005-35-0
Chemical Name	Calcium alginate
Empirical Formula	$[(C_6H_70_6)_2Ca]$
Equivalent Weight (average)	219.00

(2) Calcium Alginate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirement
(1)	(2)	(3)
1	Purity as $[(C_6H_70_6)_2Ca]$, per cent. by mass, on dry basis, Min	90
2	Moisture, per cent. by mass, (on drying at 105°C for 4 h), Max	15
3	Insoluble matter, per cent. by mass, Max	0.2
4	Ash, per cent. by mass, Max	18-27
5	Total plate count per g, Max	5000
6	Yeasts and moulds per g, Max	500
7	Arsenic, mg/kg, *Max*	3.0
8	Lead, mg/kg, *Max*	5.0

9. Alginic acid:

(1) Alginic acid shall be the hydrophilic colloidal carbohydrate extracted by the use of dilute alkali from various species of brown seaweed (Phaeophyceae),described chemically as a linear glycurono glycan consisting mainly of B (1-4) linked D-mannuronic and L-guluronic acid units in the pyranose ring forms and white to yellowish-white, fibrous powder and as described below, namely:-

Common Name	Alginic Acid
INS No.	400
C.A.S No.	9005-32-7
Chemical Name	Alginic acid
Empirical Formula	$(C_6H_8O_6)_n$
Equivalent Weight (average)	200.00

(2) Alginic acid shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Purity as $(C_6H_8O_6)_n$, per cent. by mass, Min	91
2	Moisture, per cent. by mass, on drying at 105°C for 4 h, Max	15

3	Insoluble matter, per cent. by mass, Max	0.2
4	Ash (on dry basis), per cent. by mass, Max	4
5	Acid insoluble ash (on dry basis), per cent. by mass, Max	0.5
6	*Escherichia coli*	Absent (in 1 g)
7	*Salmonella*	Absent (in 10 g)
8	Arsenic, mg/kg, *Max*	3.0
9	Lead, mg/kg, *Max*	5.0

10. Guar Gum:

(1) Guar Gum shall be a white to yellowish white powder with a characteristic guar odour and as described below, namely:-

Common Name	Guar Gum
INS No.	412
C.A.S No.	9000-30-0
Chemical Name	Galactomannan

(2) Guar Gum shall conform to the requirements specified in the table below, namely:-

Table

Requirements for Guar Gum

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1	Purity as galactomannans, per cent. by mass, Min	77.5
2	Acid insoluble matter, per cent. by mass, Max	3.0
3	Total ash, per cent. by mass, Max	1.5
4	Protein (N x 5.7), per cent. by mass, Max	6.0
5	Starch	shall pass the test as per BIS standard
6	Loss on drying at 105 ^{0}C for 5 h, Max	12.0
7	Mould and yeast count per g, Max	500
8	*Escherichia coli*, per g, Max	Absent
9	*Salmonella*	Absent (in 10 g)

10	Total plate count per g, Max	5000
11	Arsenic, mg/kg, *Max*	3.0
12	Lead, mg/kg, *Max*	2.0

11. Gum Karaya:

(1) Gum Karaya shall be a dried gummy exudation obtained from the stems and branches of *Sterculiaurens Roxb and S. Villosa* Roxb of family Sterculiaceae, white to amber colour in the form of tears of variable size or in broken irregular pieces and as described below, namely:-

Common Name	Karaya, Gum Karaya, Sterculia, Gum Sterculia, Kadaya, Katilo, Kullo, Kuterra
INS No.	416
C.A.S No.	9000-36-6

(2) Gum Karaya shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirement
(1)	(2)	(3)
1	Loss on drying, per cent. by mass, Max	16
2	Starch	Nil
3	Total ash, per cent. by mass (on dry basis), Max	8
4	Acid insoluble ash, per cent. by mass (on dry basis), Max	1
5	Acid insoluble matter, per cent. by mass (on dry basis), Max	3
6	Chlorides	Nil
7	Sulphates	Nil
8	Volatile acid (as acetic acid), per cent. by mass, Min	10
9	Swelling property, ml, Min	200
10	Water absorption, ml, Min	75
11	Freedom from animal filth	shall pass test as per BIS Standard
12	Salmonella	Negative (on 1 g)

13	E. coli	Negative (on 1 g)
14	Arsenic, mg/kg, *Max*	3.0
15	Lead, mg/kg, *Max*	2.0

12. Polyglycerol esters of fatty acids

(1) Polyglycerol esters of fatty acids shall be yellowish to amber unctuous liquids, semi-solids or waxy solids and as described below, namely:-

Common Name	Polyglycerol esters of fatty acids
INS No.	475
Chemical Name	polyglycerol fatty acid ester and glyceran fatty acid esters

(2) Polyglycerol esters of fatty acids shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Total fatty acid ester content, per cent. by mass, Min	90
2.	Free fatty acids (estimated as oleic acid), per cent. by mass ,Max	6
3.	Total glycerol and polyglycerol, per cent. by mass	18-60
4.	Free glycerol and polyglycerol, per cent. by mass, Max	7
5.	Sulphated ash, per cent. by mass, Max	0.5
6.	Lead, mg/kg, *Max*	2.0
7.	Copper and zinc, mg/kg, *Max*	50
8.	Arsenic, mg/kg, *Max*	3.0

13. Polyglycerol Esters of Interesterified Ricinoleic Acid:

(1) Polyglycerol Esters of Interesterified Ricinoleic Acid shall be a highly viscous liquids, yellowish to brown in colour, with a typical fat-related odour and as described below, namely:-

Common Name	glyceran ester of condensed castor oil fatty acids and polyglycerol esters of polycondensed fatty acids from castor oil
INS No.	476
Chemical Name	Polyglycerol Esters of Interesterified Ricinoleic Acid

(2) Polyglycerol Esters of Interesterified Ricinoleic Acid shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Hydroxyl value	80-100
2.	Refractive index	1.4630 to 1.4665
3.	Acid value, Max (mg KOH per g)	6
4.	Iodine value, Wijs	72-103
5.	Lead, mg/kg, *Max*	2.0
6.	Copper and zinc, mg/kg, *Max*	50
7.	Arsenic, mg/kg, *Max*	3.0

14. Glycerol Esters of Wood Rosin:

(1) Glycerol Esters of Wood Rosin shall be a hard pale amber coloured resin produced by the esterification of pale wood rosin with food grade glycerin and as described below, namely:-

Common Name	Ester Gums
INS No.	445(iii)
C.A.S No.	8050-30-4
Chemical Name	Glycerol Esters of Wood Rosin

(2) Glycerol Esters of Wood Rosin shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirement
(1)	(2)	(3)
1.	Acid value (mg KOH/g)	3- 9
2.	Drop softening point, ^{0}C	88- 96

3.	Hydroxyl number	15- 45
4.	Lead, mg/kg, *Max*	1.0
5.	Arsenic, mg/kg, *Max*	3.0

15. Pectin:

(1) Pectin shall be white, yellowish, light greyish or light brownish powder and as described below, namely:-

Common Name	Pectin
INS No.	440
C.A.S No.	9000-69-5
Chemical Name	Pectin

(2) Pectin shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Loss on drying, per cent. by mass, Max	12
2.	Sulphur dioxide, mg/kg, Max	50
3.	Methanol, per cent. by mass, Max	1
4.	Ethanol, per cent. by mass, Max	1
5.	2-propanol, per cent. by mass, Max	1
6.	Methanol, ethanol and 2-propanol, per cent. by mass, Max	1
7.	Acid insoluble ash, per cent. by mass, Max	1
8.	Total insolubles, per cent. by mass, Max	3
9.	Nitrogen, per cent. by mass, Max	2.5
10.	Galacturonic acid, per cent. by mass on ash-free and dried basis, Min	65
11.	Degree of amidation, per cent. by mass of total carboxyl groups of pectin, Max	25
12.	Lead, mg/kg, *Max*	2.0
13.	Copper, mg/kg, *Max*	300
14.	Arsenic, mg/kg, *Max*	5.0

16. Carrageenan :

(1) Carrageenan shall be yellowish or tan to white, coarse to fine powder that is practically odourless and as described below, namely:-

Common Name	Carrageenan
INS No.	407
C.A.S No.	9000-07-1

(2) Carrageenan shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Loss on drying, per cent. by mass, on drying at 1O5 ^{0}C till constant weight, Max	12
2.	pH(1 in 100 suspension)	8-11
3.	Viscosity, at 75^0 C (1.5% solution), Min	5 cp
4.	Sulfate, (as SO_4) on the dried basis, per cent.	15 to 40
5.	Total ash, on the dried basis, per cent.	15 to 40
6.	Acid-insoluble ash, per cent., Max	1
7.	Acid-insoluble matter, per cent., Max	2
8.	Residual solvents, per cent. of ethanol, isopropanol, or methanol, singly or in combination, Max	0.1
9.	Total (aerobic) plate count, cfu/g, Max	5000
10.	*Salmonella spp.*	Negative (per test)
11.	*Escherichia coli*	Negative (in 1 g)
12.	Cadmium, mg/kg, *Max*	1.5
13.	Mercury, mg/kg, *Max*	1.0
14.	Arsenic, mg/kg, *Max*	3.0
15.	Lead, mg/kg, *Max*	5.0

3.2.12 Antioxidants:

1. Butylated hydroxyanisole

(1) Butylated hydroxy anisole shall be in the form of white or slightly yellow waxy crystalline solid with an aromatic odour and as described below, namely:-

Common Name	BHA
INS No.	320
C.A.S No.	25013-16-5
Chemical Name	A mixture of 3- and 2-tertiary butyl-4-hydroxyanisole; a mixture of 3- and 2-tertiary butyl-4-methoxyphenol.
Empirical Formula	$C_{11}H_{16}O_2$
Molecular Weight	180.24

(2) Butylated hydroxyanisole shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	a) Purity as $C_{11}H_{16}O_2$, per cent. by mass, Min b) 3 tertiary butyl4-hydroxyanisole, per cent. by mass, Min	98.5 85
2.	Melting point, ^0C	48 to 63
3.	Sulphated ash, per cent. by mass, Max	0.05
4.	Phenolic impurities, per cent. by mass, Max	0.5
5.	Specific absorption E 1 per cent. (1 cm cell) in ethanol at a) 290 nm b) 228 nm	 190 Min 210 Max 326 Min 345 Max
6.	Lead, mg/kg, *Max*	2.0
7.	Arsenic, mg/kg, *Max*	3.0
8.	Iron, mg/kg, *Max*	5.0

2. Dodecyl gallate:

(1) Dodecyl gallate shall be a creamy white waxy solid, which may have a slightly bitter taste and as described below, namely:-

Common Name	Lauryl gallate
INS No.	312
C.A.S No.	1166-52-5
Chemical Name	Dodecyl gallate, n-dodecyl (or lauryl) ester of 3,4,5-trihydroxybenzoic acid
Empirical Formula	$C_{19}H_{30}O_5$
Molecular Weight	338.45

(2) Dodecyl gallate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirement
(1)	(2)	(3)
1.	Purity as $C_{19}H_{30}O_5$, per cent. by mass, Min	98.5
2.	Moisture, per cent. by mass, Max	0.5
3.	Sulphated ash, per cent. by mass, Max	0.05
4.	Chlorinated organic compounds (as Cholrine) mass, mg/kg, Max	100
5.	Free acid (as gallic acid), per cent. by mass, Max	0.5
6.	Specific absorption at 275 nm, Min Max	 300 325
7.	Lead, mg/kg, *Max*	2.0
	Arsenic, mg/kg, *Max*	3.0

3. Propyl gallate:

(1) Propyl gallate shall be a white to creamy-white crystalline, odourless solid with a slightly bitter taste and as described below, namely:-

Common Name	Propyl gallate
INS No.	310
C.A.S No.	121-79-9
Chemical Name	Propyl gallate, and n-propyl ester of 3,4,5-trihydroxybenzoic acid
Empirical Formula	$C_{10}H_{12}O_5$
Molecular Weight	212.21

(2) Propyl gallate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as $C_{10}H_{12}O_5$, per cent. by mass, Min	99
2.	Moisture, per cent. by mass, Max	0.5
3.	Sulphated ash, per cent. by mass, Max	0.05
4.	Melting range, ^0C	146-150
5.	Chlorinated organic compounds (as cholrine), mg/kg, Max	100
6.	Free acid (as gallic acid), per cent. by mass, Max	0.5
7.	Lead, mg/kg, *Max*	2.0
8.	Arsenic, mg/kg, *Max*	3.0

4. Octyl gallate:

(1) Octyl gallate shall be a white to creamy-white odourless solid which may have a slightly bitter taste and as described below, namely:-

Common Name	Octylgallate
INS No.	311
C.A.S No.	1034-01-01
Chemical Name	Octyl gallate and n-octyl ester of 3, 4, 5-trihydroxybenzoic acid
Empirical Formula	$C_{15}H_{22}O_5$
Molecular Weight	282.34

(2) Octyl gallate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as $C_{15}H_{22}O_5$, per cent. by mass, Min	98.5
2.	Moisture, per cent. by mass, Max	0.5
3.	Sulphated ash, per cent. by mass, Max	0.05
4.	Melting range, ^0C	99-102

5.	Chlorinated organic compounds (as cholrine), mg/kg, Max	100
6.	Free acid (as gallic acid), per cent. by mass, Max	0.5
7.	Lead, mg/kg, *Max*	2.0
8.	Arsenic, mg/kg, *Max*	3.0

5. Ascorbyl palmitate

(1) Ascorbyl palmitate shall be a white or yellowish white solid, with a citrus like odour and as described below, namely:-

Common Name	Vitamin C palmitate
INS No.	304
Chemical Name	L-ascorbylpalmitate, 8-palmitoyl-3- keto-L-gulofuranolactone, 2, 3-dehydro-L threo-hexono-1, 4-lactone-6-palmitate.
Empirical Formula	$C_{22}H_{38}O_7$
Molecular Weight	414.55

(2) Ascorbyl palmitate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirement
(1)	(2)	(3)
1.	Purity as $C_{22}H_{38}O_7$, per cent. by mass (on dry basis), Min	95
2.	Sulphated ash, per cent. by mass (on dry basis), Max	0.1
3.	Loss on drying, per cent. by mass, after drying in a vacuum oven at 56-60 ^{0}C for one hour, Max	2
4.	Lead, mg/kg, *Max*	2.0
5.	Arsenic, mg/kg, *Max*	3.0

6. Sodium ascorbate:

(1) Sodium Ascorbate shall be a white to yellowish crystalline solid and as described below, namely:-

Common Name	Sodium ascorbate
INS No.	301
C.A.S No.	134-03-2
Chemical Name	Vitamin C sodium and sodium L-ascorbate.
Empirical Formula	$C_6H_7Na0_6$
Molecular Weight	198.11

(2) Sodium ascorbate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Assay as $C_6H_7Na0_6$ (on dry basis), per cent. by mass	99 to 101
2.	Loss on drying, per cent. by mass, Max, after drying in vacuum over phosphorus pentoxide at 60^0C for 4 hours	0.25
3.	Lead, mg/kg, *Max*	2.0
4.	Arsenic, mg/kg, *Max*	3.0

3.2.13 Flavour enhancers:

1. Monosodium L-glutamate:

(1) Monosodium L-glutamate shall be in the form of white, practically odourless crystals or crystalline powder which may have either a slightly sweet or a slightly salty taste and as described below, namely:-

Common Name	Sodium glutamate, MSG
INS No.	621
C.A.S No.	142-47-2
Chemical Name	monosodium L-glutamate monohydrate, sodium glutamate, MSG
Empirical Formula	$C_5H_80_4NNaH_20$
Molecular Weight	187.13

(2) Monosodium L-glutamate shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as ($C_5H_80_4NNaH_20$), per cent. by mass, Min	99
2.	Loss on drying, per cent. by mass, at 98 ^{0}C for 5h, Max	0.5
3.	Chloride, per cent. by mass, Max	0.2
4.	Lead, mg/kg, *Max*	1.0
5.	Arsenic, mg/kg, *Max*	2.0

3.2.14 Glazing Agent:

1. Mineral Oil (low viscosity):

(1) Mineral oil, food grade is a mixture of liquid hydrocarbons, essentially parafinic and napthenic in nature, obtained from petroleum, refined by the use of oleum, excluding the mineral oils produced by the hydrogenation process unless they have been subsequently refined by the use of oleum and also excluding other types of white mineral oils to which antioxidants may have been added for technological purposes which shall be colourless, transparent oily liquid, free from fluorescence, odourless, tasteless, and as described below, namely:-

Common Name	Liquid paraffin, liquid petrolatum, food grade mineral oil, white mineral oil
INS No.	905e
C.A.S No.	8012-95-1

(2) Mineral Oil (low viscosity) shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Acidity or alkalinity	shall pass the test as per BIS standard
2.	Readily carbonizable substances	shall pass the test as per BIS standard
3.	Polynuclear aromatic hydrocarbons, absorbance	0.10

	at wave lengths between 260-350 nm, Max	
4.	Solid paraffins	shall pass the test as per BIS standard
5.	Sulphurs (as SO_4)	shall pass the test as per BIS standard
6.	Lead, mg/kg, *Max*	1.0
7.	Arsenic, mg/kg, *Max*	1.0

2. Mineral Oil (High viscosity):

(1) A mixture of highly refined paraffinic and naphthenic liquid hydrocarbons with boiling point above 350^0, obtained from mineral crude oils through various refining steps including distillation, extraction and crystallization and subsequent purification by acid or catalytic hydro treatment which may contain antioxidants approved for food use shall be colourless, transparent oily liquid, free from fluorescence, odourless, tasteless and as described below, namely:-

Common Name	Liquid paraffin, liquid petrolatum, food grade mineral oil, white mineral oil
INS No.	905d
C.A.S No.	8012-95-1

(2) Oil (High viscosity) shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Acidity or alkalinity	shall pass the test as per BIS standard
2.	Readily carbonizable substances	shall pass the test as per BIS standard
3.	Polynuclear aromatic hydrocarbons, absorbance at wave lengths between 260-350 nm, Max	0.10* (test shall be as per BIS standard)
4.	Solid paraffins	shall pass the test as per BIS standard
5.	Sulphurs (as SO_4)	shall pass the test as per BIS standard
6.	Lead, mg/kg, *Max*	1.0

7.	Arsenic, mg/kg, *Max*	1.0

3.2.15 Humectant or Wetting Agent or Dispersing Agent:

1.Propylene glycol:

(1) Propylene Glycol shall be a clear, colourless, practically odourless, viscous liquid having a slight characteristic taste and as described below, namely:-

Common Name	Propylene glycol
INS No.	1520
C.A.S No.	57-55-6
Chemical Name	1, 2-propanediol, 1, 2 dihydroxypropane and methyl glycol
Empirical Formula	$C_6H_80_2$
Molecular Weight	76.1

(2) Propylene glycol shall conform to the requirements specified in the table below, namely:-

Table

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity as $C_6H_80_2$, per cent. by mass, Min	99.5
2.	Moisture, per cent. by mass, Max	0.2
3.	Acidity	shall pass test as per BIS standard
4.	Sulphated ash (on dry basis), per cent. by mass, Max	0.007
5.	Presence of other polyhydroxy compounds	Absent
6.	Ethylene glycol	Absent
7.	Lead, mg/kg, *Max*	2.0
8.	Arsenic, mg/kg, *Max*	3.0

3.2.16 Sweetner or Humectant or Sequestrant:

1. Sorbitol:

(1) Sorbitol shall be white hygroscopic powder having a sweet taste and as described below, namely:-

Common Name	Sorbitol
INS No.	420
C.A.S No.	50-70-4

Chemical Name	d-sorbitol, d-glucitol, d-sorbite, d-sorbol, and 1,2,3,4,5,6-hevanehexal
Empirical Formula	$C_6H_{14}O_6$
Molecular Weight	182.17

(2) Sorbitol shall conform to the requirements specified in the table below, namely:-

SI. No.	Characteristic	Requirements
(1)	(2)	(3)
1.	Purity, as d sorbitol $C_6H_{14}O_6$, per cent. by mass. Mi*n*	91 or 99 (Depending on the method of test used for analysis.)
2.	Moisture per cent. by mass, *Max*	1
3.	Melting range a) Metastable b) Stable	 92.5 ^{0}C to 93.5 ^{0}C 96 ^{0}C to 97.5 ^{0}C
4.	Reducing sugars, per cent. by mass, *Max*	0.2
5.	Sulphated ash, per cent. by mass, Max	0.1
6.	Sulphates (as SO_4) per cent. by mass, Max	0.01
7.	Chlorides (as Cl) per cent. by mass *Max*	0.005
8.	Arsenic , mg/kg, *Max*	3.0
9.	Lead , mg/kg, *Max*	1.0
10.	Nickel, mg/kg, *Max*	2.0]

[18][3.3 Other substances for use in food products

3.3.1 Flavouring agents and related substances

1) Flavouring agents include flavour substances, flavour extracts or flavour preparations, which are capable ofimparting flavouring properties, namely taste or odour or both to food. The following type of Flavouring agents may be added to food as per Good Manufacturing Practices: -

(i) Natural flavours and natural favouring substances means flavour preparations and single substancerespectively, acceptable for human consumption, obtained exclusively by physical processes from vegetables, for human consumption

(ii) Nature-identical flavouring substances means substances chemically isolated from aromatic rawmaterials or obtained synthetically; they are chemically identical to substances present in natural productsintended for human consumption, either processed or not.

(iii) Artificial flavouring substances means those substances which have not been identified in naturalproducts intended for human consumption either processed or not;

2) Use of antioxidants, emulsifying and stabilising agents and food preservatives in flavour -The flavouring agents may contain permitted antioxidants, emulsifying and stabilising agents and foodpreservatives.

3) Use of anticaking agent in flavours - Synthetic amorphous silicon dioxide (INS 551) may be used in powder flavouringsubstances to a maximum level of 2 percent.

4) Restriction on use of flavouring agents:-The use of the following flavouring agents is prohibited in any article of food, namely,-

(i) Coumarin and dihydrocoumarin;

(ii) Tonkabean (Dipteryl adorat);

(iii) β-asarone and cinamyl anthracilate

(iv) Estragole

(v) Ethyl methyl ketone

(vi) Ethyl-3-phenylglycidate

(vii) Eugenyl methyl ether

(viii) Methyl β napthyl ketone

(ix) p-Propylanisole

(x) Saffrole and isosaffrole

(xi) Thujone and isothujone (α & β thujone)

[69][(xii) 4,5 epoxydec-2(trans)-enal]

5) Solvent in flavour

Diethyleneglycol and monoethyl ether shall not be used as solvent in flavours.

3.3.2 Lactulose syrup

1) Lactulose syrup may be used in special milk based infant food formulations, which is to be taken under medical advice upto a maximum level of 0.5 per cent of final food subject to label declaration.

2) Lactulose syrup may be used in bakery products upto 0.5 per cent maximum by weight.

3.3.3 Oligofructose

Oligofructose may be added at not more than 10 per cent of the product, in the following products, subject to label declaration under sub-regulation 43 of regulation 2.4.5 of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011,-

Dairy products like yoghurt, mousse, spreads, dairy based drinks (milkshakes, yoghurt drink), cheese, pudding, cream and ice-cream, frozen desserts like non dairy ice, sorbet and fruit ice, frozen yoghurt, flakes and ready-to-eat dry breakfast cereals, chocolate and sweets and carbohydrate based and milk product based sweets like halwa, mysore pak, boondi laddu, jalebi, khoyaburfi, peda, gulabjamun, rasgulla and similar milk product based sweets sold by any name; cooked sausages, ham and meat spreads.

3.3.4 Trehalose

Trehalose may be added as an ingredient in the following foods, subject to label declaration under sub-regulation 49 of Regulation 2.4.5 of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011,-

(i)	Biscuits, bread, cakes, breakfast cereals	0.5-10.0 per cent.
(ii)	Carbonated water, thermally processed fruits, fruit juices, fruit nectars, fruit beverages, fruit squashes, jam, jelly, fruit cheese, marmalade, dairy based drinks, milk powder	0.5-20.0 per cent
(iii)	Carbohydrate-based and milk product based sweets like gulabjamun, rasgulla, peda , khoya burfi	0.5-20.0 per cent
(iv)	Macroni products, noodles, pasta.	0.5-5.0 per cent
(v)	Sweets and confectionery, candies and icings	5.0-7.5 per cent
(vi)	Savouries and snacks	0.5-1.0 per cent

Amendment for substitution of highlighted provision

[73]**[3.3.4 Trehalose.-**(1) Trehalose shall be in the form of white or almost white crystals; soluble in water, slightly soluble in ethanol.

(2) Trehalose shall be added at the level of good manufacturing practices (GMP) in all food categories except infant food provided that the standard specifications of such food products as prescribed under Food Safety and standards Regulations, 2011 are not altered with.

(3) It shall conform to the following requirements, namely:-

TABLE

S. No.	Parameters	Limits
1	Loss on drying (%)	Not more than 1.5
2	Total ash (%)	Not more than 0.05

(4) *{Trehalose may be added as an ingredient subject to label declaration under the provisions 1.8 of schedule-II of the Food Safety and Standards (Labelling and Display) Regulations, 2020, without health claims}.
(5) Methods of analysis for trehalose shall be as specified in Joint FAO/WHO Expert Committee on Food Additives (JECFA) (2000).]
*[Amendment in force from 4th March 2021; FBOs to comply with the provisions by 1st January 2022; *FBOs to comply with the provisions by 1st July 2022 vide Direction: F.No. REG/L&D-Extension/FSSAI-2021 dated 22nd October, 2021]*

3.3.5 Phyto or Plant Stanol

[66][Phyto or Plant stanol esters may be added to the following products so as to allow users to easily restrict their consumption to maximum 3 g stanol per day through the use of either one portion containing maximum 3 g or three portions each containing 1 g and it shall be added subject to the table declaration under sub-regulation 48 of regulation 2.4.5 of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, namely:-]

(i) Fat spread, milk products, milk based fruit drink, fermented milk products, soy and rice drink, cheese products, yoghurt products, spice sauces, salad dressings, juices and nectars.

(ii) Products containing Phyto or Plant Stanols be sold in single portions containing either maximum 3 g or 'maximum 1 g of Phyto or Plant Stanols, calculated as free Phyto or Plant Stanols, and if they do not contain so, there should be a clear indication of what constitutes a standard portion of the food, expressed in g or ml, and of the amount of Phyto or Plant Stanols, calculated as free Phyto or Plant Stanols, contained in such a portion;

3.3.6 Phyto or Plant Sterol

(a) The Phyto or Plant sterols from Non-Genetically Modified source may be used in the following categories of food products with their use at the level not exceeding 3 g/day;-

Fat spread, milk products, milk based fruit drink, fermented milk products, soy and rice drinks, cheese products, yoghurt products, spice sauces, salad dressings, juices and nectars, edible oils, and bakery products

Products containing Phyto or Plant Sterols be sold in single portions containing either maximum 3 g or maximum 1g of Phyto/ Plant Sterols, calculated as free Phyto or Plant Sterols. And if they do not contain so, there should be a clear indication of what constitutes a standard portion of the food, expressed in g or ml, and of the amount of Phyto or Plant Sterol, calculated as free Phyto or Plant Sterol, contained in such a portion. In all events, the composition and labelling of the products should be such as to allow users to easily restrict their consumption to maximum 3g/day of Phytosterols through the use of either one portion of 3g or three portions containing minimum 1g.

(b) The products referred to in sub-clause (a) shall not exceed the Acceptable Daily Intake (ADI) for Phytosterols and shall contain the label declarations as provided in the clause 55 of sub-regulation 2.4.5 of the Food Safety and Standards (Packaging and Labelling) Regulations, 2011**.]**

[71][3.4 PROCESSING AIDS

3.4.1: DEFINITIONS AND CONDITIONS OF USE

(1) Processing aids included in these regulations

The processing aids listed herein are recognised as suitable for use in foods in conformance with the provisions of these regulations and have been assigned an Acceptable Daily Intake (ADI) or determined (wherever applicable), on the basis of other criteria, to be safe and the use of processing aids in conformance with these regulations has to be technologically justified.

(**2) Product category**

The foods or food processing procedures, in which the processing aid is utilised, are defined by these regulations.

(3) Food in which processing aids may be used

The conditions, under which processing aids may be used in foods, are defined by these regulations.

(4) Foods in which processing aids shall not be used

Unless expressly permitted in these regulations, processing aids shall not be used in food processing.

(5)"Processing aid" means any substance or material, not including apparatus or utensils, and not consumed as a food ingredient by itself, intentionally used in the processing of raw materials, foods or its ingredients, to fulfil a certain technological purpose during treatment or processing and which may result in the non-intentional but unavoidable presence of residues or derivatives in the final product.

(6)"Acceptable Daily Intake (ADI)" means the amount of a processing aid in food expressed on a body weight basis that can be ingested daily over a lifetime without appreciable health risk and a processing aid, meeting this criterion shall be used within the bounds of Good Manufacturing Practice (GMP) as specified in clause (11) of this sub-regulation.

(7) Maximum permitted Level of a processing aid, is the highest concentration of the processing aid, determined to be functionally effective in a food or food category and agreed to be safe and it is generally expressed as mg/kg of food.

(8) "Residual level" means the level of processing aid remaining in food after processing. The levels should be designated with respect to those directly measured by analysis or estimated by other means. Values are in mg/kg and values at the detection limit of available analytical procedures are reported as "Not more than".

(9) "EC number" (Enzyme Commission number) means the number which the Enzyme Commission uses to classify the principal enzyme activity.

(10) Justification for the use of processing aids

The use of a substance as a processing aid is justified when such use performs one or more technological functions during treatment or processing of raw materials, foods, or ingredients. Any residues of processing aids remaining in the food after processing should not perform a technological function in the final product.

(11) Good Manufacturing Practice (GMP)

All the processing aids subject to the provisions of these regulations shall be used under conditions of good manufacturing practices (GMP) which includes the following, namely: -

(a) the quantity of the substance used shall be limited to the lowest achievable level necessary to accomplish its desired technological function;

(b) residues or derivatives of the substance remaining in food should be reduced to the extent reasonably achievable and should not pose any health risk; and

(c) the substance is prepared and handled in the same way as a food ingredient.

(12) Specifications for the identity and purity of processing aids

(a) Substances used as processing aids should be of food grade quality. This can be demonstrated by conforming to the applicable specifications of identity and purity recommended under these regulations, and in case such standards are not specified, the purity criteria accepted by international bodies such as Codex Alimentarius may be adhered to.

(b) The safety of a substance used as a processing aid shall be demonstrated by the supplier or the user of the substance. The demonstration of safety shall include appropriate assessment of any unintended or unavoidable residues resulting from its use as a processing aid under conditions of GMP.

(13) Conditions for labelling

The product covered by this Standard shall be labelled in accordance with the Food Safety and Standards (Packaging & Labelling) Regulation, 2011. Declaration of vegetarian or non-vegetarian irrespective of the residue level, has to be mentioned on the label.]

[18][APPENDIX A:

I.FOOD CATEGORY SYSTEM

The food category system is a tool for assigning food additive uses in these Regulations. The food category system applies to all foodstuffs. The food category descriptors are not to be legal product designations nor are they intended for labelling purposes. The food category system is based on the following principles:

(a) The food category system is hierarchical, meaning that when an additive is recognised for use in a general category, it is recognised for use in all its sub-categories, unless otherwise stated. Similarly, when an additive is recognised for use in a sub-category, its use is recognised in any further subcategories or individual foodstuffs mentioned in a sub-category. The food category system is based on product descriptors of foodstuffs as marketed, unless otherwise stated.

(b) The food category system takes into consideration the carry-over principle. By doing so, the food category system does not need to specifically mention compound foodstuffs (e.g. prepared meals, such as pizza, because they may contain, pro rata, all the additives endorsed for use in their components), unless the compound foodstuff needs an additive that is not endorsed for use in any of its components.

1.0 Dairy products and analogues, excluding products of food category 2.0

1.1 Milk and dairy-based drinks

1.1.1 Milk and buttermilk (plain)

1.1.1.1 Milk (plain)

1.1.1.2 Buttermilk (plain)

1.1.2 Dairy-based drinks, flavoured and/or fermented

1.2 Fermented and renneted milk products (plain), excluding food category (dairy-based drinks)

1.2.1 Fermented milks (plain)

1.2.1.1 Fermented milks (plain), not heat-treated after fermentation

1.2.1.2 Fermented milks (plain), heat-treated after fermentation

1.2.2 Renneted milk (plain)

1.3 Condensed milk and analogues (plain)

1.3.1 Condensed milk (plain)

1.3.2 Beverage whiteners

[52][1.3.2.1 Non - dairy based beverage whitener]

1.4 Cream (plain) and the like

1.4.1 Pasteurized cream (plain)

1.4.2 Sterilized and UHT creams, whipping and whipped creams, and reduced fat creams(plain)

1.4.3 Clotted cream (plain)

1.4.4 Cream analogues

1.5 Milk powder and cream powder and powder analogues (plain)

1.5.1 Milk powder and cream powder (plain)

[52][1.5.1.1 Dairy based dairy whitener]

1.5.2 Milk and cream powder analogues

1.6 Cheese and analogues

1.6.1 Unripened cheese

1.6.2 Ripened cheese

1.6.2.1 Ripened cheese, includes rind

1.6.2.2 Rind of ripened cheese

1.6.2.3 Cheese powder

1.6.3 Whey cheese

1.6.4 Processed cheese

1.6.4.1 Plain processed cheese

1.6.4.2 Flavoured processed cheese, including containing fruit, vegetables, meat etc.

1.6.5 Cheese analogues

1.6.6 Whey protein cheese

1.7 Dairy-based desserts

1.8 Whey and whey products, excluding whey cheeses

1.8.1 Liquid whey and whey products, excluding whey cheeses

1.8.2 Dried whey and whey products, excluding whey cheeses.

2.0 Fats and oils, and fat emulsions

2.1 Fats and oils essentially free from water

2.1.1 Butter oil, anhydrous milk fat, ghee

2.1.2 Vegetable oils and fats

2.1.3 Lard, tallow, fish oil, and other animal fats

2.2 Fat emulsions mainly of type water-in-oil

2.2.1 Butter

2.2.2 Fat spreads, dairy fat spreads and blended spreads

2.3 Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions

2.4 Fat-based desserts excluding dairy-based dessert products of food category 1.7

2.4.1 Coco based spreads, including fillings

3.0 Edible ices, including sherbet and sorbet

4.0 Fruits and vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

4.1 Fruit

4.1.1 Fresh fruit

4.1.1.1 Untreated fresh fruit

4.1.1.2 Surface-treated fresh fruit

[52][4.1.1.3 Peeled or cut, minimally processed fruit]

4.1.2 Processed fruit

4.1.2.1 Frozen fruit

4.1.2.2 Dried fruit, nuts and seeds

4.1.2.3 Fruit in vinegar, oil, or brine

4.1.2.4 Canned or bottled (pasteurized) fruit

4.1.2.5 Jams, jellies, marmalades, fruit bar/toffee and fruit cheese

[52][4.1.2.6 Fruit-based spreads (e.g. chutney) excluding products of food-category 4.1.2.5]

4.1.2.7 Candied fruit

4.1.2.8 Fruit preparations, including pulp, purees, fruit toppings and coconut milk

4.1.2.9 Fruit-based desserts, including fruit-flavoured water-based desserts

4.1.2.10 Fermented fruit products

4.1.2.11 Fruit fillings for pastries

4.1.2.12 Cooked fruit

4.2 Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloevera), seaweeds, and nuts and seeds

4.2.1 Fresh vegetables, (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds and nuts and seeds

4.2.1.1 Untreated fresh vegetables, (including mushrooms and fungi, roots and tubers, pulses and legumes including soybeans, and aloe vera), seaweeds and nuts and seeds

4.2.1.2 Surface-treated fresh vegetables, (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds and nuts and seeds

[52][4.2.1.3 Peeled, cut or shredded minimally processed vegetables [(including mushrooms and fungi, roots and tubers, fresh pulses and legumes, and aloe vera) sea weeds, nuts and seeds]]

4.2.2 Processed vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

4.2.2.1 Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds and nuts and seeds

4.2.2.2 Dried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

4.2.2.3 Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweeds in vinegar, oil, brine, or soybean sauce

4.2.2.4 Canned or bottled (pasteurized) or retort pouch vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloevera), and seaweeds

4.2.2.5 Vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweed, and nut and seed purees and spreads (e.g. peanut butter)

4.2.2.6 Vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweed, and nut and seed pulps and preparations (e.g. vegetable desserts and sauces, candied vegetables) other than food category 4.2.2.5

4.2.2.7 Fermented vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweed products, excluding fermented soybean products of food categories 6.8.6, 06.8.7, 12.9.1, 12.9.2.1 and 12.9.2.3

4.2.2.8 Cooked or fried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweeds

5.0 Confectionery

5.1 Cocoa products and chocolate products including imitations and chocolate substitutes

5.1.1 Cocoa mixes (powders) and cocoa mass/cake

5.1.2 Cocoa mixes (syrups)

5.1.3 Cocoa and chocolate products

5.1.4 Imitation chocolate, chocolate substitute products

5.2 Confectionery including hard and soft candy, nougats, etc. other than food categories 5.1,5.3, and 5.4

5.2.1 Hard candy

5.2.2 Soft candy

5.2.3 Nougats and marzipans

5.3 Chewing gum

5.4 Decorations (e.g. for fine bakery wares), toppings (non-fruit), and sweet sauces

6.0 Cereals and cereal products, derived from cereal grains, from roots and tubers, pulses, legumes and pith or soft core of palm tree, excluding bakery wares of food category 7.0

6.1 Whole, broken, or flaked grain, including rice

6.2 Flours and starches (including soybean powder)

6.2.1 Flours

6.2.2 Starches

6.3 Breakfast cereals, including rolled oats

6.4 Pastas and noodles and like products

6.4.1 Fresh pastas and noodles and like products

6.4.2 Dried pastas and noodles and like products

6.4.3 Pre-cooked pastas and noodles and like products

6.5 Cereal and starch based desserts

6.6 Batters

6.7 Pre-cooked or processed cereal/grain/legume products

6.8 Soybean products (excluding soybean-based seasonings and condiments of food category12.9)

6.8.1 Soybean-based beverages

6.8.2 Soybean-based beverage film

6.8.3 Soybean curd (tofu)

6.8.4 Semi-dehydrated soybean curd

6.8.4.1 Thick gravy-stewed semi-dehydrated soybean curd

6.8.4.2 Deep fried semi-dehydrated soybean curd

6.8.4.3Semi-dehydrated soybean curd, other than food categories 6.8.4.1 and 6.8.4.2

6.8.5 Dehydrated soybean curd

6.8.6 Fermented soybeans

6.8.7 Fermented soybean curd

6.8.8 Other soybean protein products

7.0 Bakery wares

7.1 Bread and ordinary bakery wares and mixes

7.1.1 Breads and rolls

7.1.1.1 Yeast-leavened breads and specialty breads

7.1.1.2 Soda breads

7.1.2 Crackers

7.1.3 Other ordinary bakery products

7.1.4 Bread-type products, including bread stuffing and bread crumbs

7.1.5 Steamed breads and buns

7.1.6 Mixes for bread and ordinary bakery wares

7.2 Fine bakery wares (sweet, salty, savoury) and mixes

7.2.1 Cakes, cookies and pies

7.2.2 Other fine bakery products

7.2.3 Mixes for fine bakery wares

8.0 Meat and meat products including poultry

8.1 Fresh meat and poultry,

8.1.1 Fresh meat and poultry whole pieces or cuts

8.1.2 Fresh meat and poultry comminuted

8.2 Processed meat and poultry products in whole pieces or cuts

8.2.1 Non-heat treated processed meat and poultry products in whole pieces or cuts

8.2.1.1 Cured (including salted) non-heat treated processed meat and poultry products in whole pieces or cuts

8.2.1.2 Cured (including salted) and dried non-heat treated processed meatand poultry products in whole pieces or cuts

8.2.1.3 Fermented non-heat treated processed meat and poultry products in whole pieces or cuts

8.2.2 Heat-treated processed meatand poultry products in whole pieces or cuts

8.2.3 Frozen processed meat and poultry products in whole pieces or cuts

Amendment for substitution of highlighted provision

[77][8.2.3 Frozen raw, flavoured/marinated, processed meat and poultry products in whole pieces or cuts.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

8.3 Processed comminuted meat and poultry products

8.3.1 Non-heat treated processed comminuted meatand poultry products

8.3.1.1 Cured (including salted) non-heat treated processed comminuted meat andpoultry products

8.3.1.2 Cured (including salted) and dried non-heat treated processed comminutedmeatand poultry products

8.3.1.3 Fermented non-heat treated processed comminuted meatand poultry products

8.3.2 Heat-treated processed comminuted meat andpoultry products

8.3.3 Frozen processed comminuted meat andpoultry products

8.4 Edible casings

9.0 Fish and fish products, including molluscs, crustaceans, and echinoderms

9.1 Fresh fish and fish products, including molluscs, crustaceans, and echinoderms

9.1.1 Fresh fish

9.1.2 Fresh molluscs, crustaceans, and echinoderms

9.2 Processed fish and fish products, including molluscs, crustaceans, and echinoderms

9.2.1 Frozen fish, fish fillets, and fish products, including molluscs, crustaceans, and echinoderms

09.2.2 Frozen battered fish, fish fillets and fish products, including molluscs, crustaceans, and echinoderms

9.2.3 Frozen minced and creamed fish products, including molluscs, crustaceans, and echinoderms

9.2.4 Cooked and/or fried fish and fish products, including molluscs, crustaceans, and echinoderms

9.2.4.1 Cooked fish and fish products

9.2.4.2 Cooked molluscs, crustaceans, and echinoderms

9.2.4.3 Fried fish and fish products, including molluscs, crustaceans, andEchinoderms

9.2.5 Smoked, dried, fermented, and/or salted fish and fish products, including molluscs, crustaceans, and echinoderms

9.3 Semi-preserved fish and fish products, including molluscs, crustaceans, and echinoderms

9.3.1 Fish and fish products, including molluscs, crustaceans, and echinoderms, marinated and/or in jelly

9.3.2 Fish and fish products, including molluscs, crustaceans and echinoderms, pickled and/or in brine

9.3.3 Salmon substitutes, caviar and other fish roe products

9.3.4 Semi-preserved fish and fish products, including molluscs, crustaceans andechinoderms (e.g. fish paste), excluding products of food categories 9.3.1 - 9.3.3

9.4 Fully preserved, including canned or fermented fish and fish products, including molluscs, crustaceans, and echinoderms

10.0 Eggs and egg products

10.1 Fresh eggs

10.2 Egg products

10.2.1 Liquid egg products

10.2.2 Frozen egg products

10.2.3 Dried and/or heat coagulated egg products

10.3 Preserved eggs, including alkaline, salted, and canned eggs

10.4 Egg-based desserts

11.0 Sweeteners, including honey

11.1 Refined and raw sugars

11.1.1 White sugar, dextrose anhydrous, dextrose monohydrate, fructose

11.1.2 Powdered sugar, powdered dextrose

11.1.3 Soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar

11.1.3.1 Dried glucose syrup used to manufacture sugar confectionery

11.1.3.2 Glucose syrup used to manufacture sugar confectionery

11.1.4 Lactose

11.1.5 Plantation or mill white sugar

[52][11.1.6 Gur or Jaggery

11.1.6.1 Cane Jaggery or Gur

11.1.6.2 Palm Jaggery or Gur

11.1.6.3 Date Jaggery or Gur]

11.2 Brown sugar excluding products of food category 11.1.3

11.3 Sugar solutions and syrups, also (partially) inverted, including treacle and molasses, excluding products of food category 11.1.3

11.4 Other sugars and syrups 11.5 Honey

11.6 Table-top sweeteners, including those containing high-intensity sweeteners

12.0 Salts, spices, soups, sauces, salads and protein products

12.1 Salt and salt substitutes

12.1.1 Salt

12.1.2 Salt substitutes

12.2 Herbs, spices, seasonings, and condiments

[52][12.2.1 Herbs, spices, masalas, spice mixtures including oleoresins or extracts/derivatives thereof]

12.2.2 Seasonings and condiments

12.3 Vinegars

12.4 Mustards

12.5 Soups and broths

12.5.1 Ready-to-eat soups and broths, including canned, bottled, and frozen

12.5.2 Mixes for soups and broths

12.6 Sauces and like products

12.6.1 Emulsified sauces and dips

12.6.2 Non-emulsified sauces

12.6.3 Mixes for sauces and gravies

12.6.4 Clear sauces

12.7 Salads and sandwich spreads excluding cocoa-and nutbasedspreads of food categories 4.2.2.5 and 5.1.3

12.8 Yeast and like products

12.9 Soybean-based seasonings and condiments

12.9.1 Fermented soybean paste

12.9.2 Soybean sauce

12.9.2.1 Fermented soybean sauce

12.9.2.2 Non-fermented soybean sauce

12.9.2.3 Other soybean sauces

12.10 Protein products other than from soybeans

13.0 Foodstuffs intended for particular nutritional uses

13.1 Infant formulae, follow-on formulae, and formulae for special medical purposes for infants

13.1.1 Infant formulae

13.1.2 Follow-up formulae

13.1.3 Formulae for special medical purposes for infants

13.2 Complementary foods for infants and young children

13.3 Dietetic foods intended for special medical purposes (excluding products of food category 13.1)

13.4 Dietetic formulae for slimming purposes and weight reduction

13.5 Dietetic foods (e.g. supplementary foods for dietary use) excluding products of food categories13.1- 13.4 and 13.6

13.6 Food supplements

14.0 Beverages, excluding dairy products

14.1 Non-alcoholic ("soft") beverages

14.1.1 Waters

14.1.1.1 Natural mineral waters and source waters

14.1.1.2 Table waters and soda waters

14.1.2 Fruit and vegetable juices

14.1.2.1 Fruit juices

14.1.2.2 Vegetable juices

14.1.2.3 Concentrates of fruit juices

14.1.2.4 Concentrates of vegetable juices

14.1.3 Fruit and vegetable nectars

14.1.3.1 Fruit nectar

14.1.3.2 Vegetable nectar

14.1.3.3 Concentrates of fruit nectar

14.1.3.4 Concentrates of vegetable nectar

14.1.4 Water-based flavoured drinks, including "sport," “energy,” or "electrolyte" drinks and articulated drinks

14.1.4.1 Carbonated water-based flavoured drinks

14.1.4.2 Non-carbonated water-based flavoured drinks, including punches and ades

14.1.4.3 Concentrates (liquid or solid) for water-based flavoured drinks

14.1.5 Coffee, coffee substitutes, tea, herbal infusions, and other hot cereal and grain beverages, excluding cocoa

14.2 Alcoholic beverages, including alcohol-free and low-alcoholic counterparts

14.2.1 Beer and malt beverages

14.2.2 Cider and Perry

14.2.3 Grape wines

14.2.3.1 Still grape wine

14.2.3.2 Sparkling and semi-sparkling grape wines

14.2.3.3 Fortified grape wine, grape liquor wine, and sweet grape wine

14.2.4 Wines (other than grape)

14.2.5 Mead

14.2.6 Distilled spirituous beverages containing more than 15% alcohol

14.2.7 Aromatized alcoholic beverages

15.0 Ready-to-eat savouries

15.1 Snacks - potato, cereal, flour or starch based (from roots and tubers, pulses and legumes)

15.2 Processed nuts, including coated nuts and nut mixtures 15.3 Snacks - fish based

II. FOOD CATEGORY DESCRIPTIONS

The examples wherever given below are only indicative and not exhaustive.

1.0 Dairy products and analogues, excluding products of food category 2.0

Includes all types of dairy products that are derived from the milk of healthy milch animal(s) (e.g. cow, sheep, goat, and buffalo). In this category, a "plain" product is one that is not flavoured, nor contains fruit, vegetables or other non-dairy ingredients, nor is mixed with other non-dairy ingredients, unless permitted by relevant standards. Analogues are products in which milk fat has been partially or wholly replaced by vegetable fats or oils.

1.1 Milk and dairy-based drinks

Includes all plain and flavoured fluid milk products based on skim, part-skim, low-fat and whole milk.

1.1.1 Milk and buttermilk (plain)

Includes plain fluid products only. Includes reconstituted plain milk that contains only dairy ingredients.

1.1.1.1 Milk (plain)

Fluid milk obtained from milking animals (e.g. cows, sheep, goats, and buffalo). Milk is usually heat-treated bypasteurization, ultra-high temperature (UHT) treatment or sterilization. Includes skim, part-skim, low-fat and whole milk.

1.1.1.2 Buttermilk (plain)

Buttermilk is the nearly milk fat-free fluid remaining from the butter-making process (i.e. the churning fermented or non-fermented milk and cream) and buttermilk is also produced by fermentation of fluid skim milk, either by spontaneous souring by the action of lactic acid-forming or aroma-forming bacteria, or by inoculation of heated milk with pure bacterial cultures (cultured buttermilk). Buttermilk may be pasteurized or sterilized.

[52][1.1.2Dairy-based drinks, flavoured or fermented

Includes all ready-to-drink flavoured and aromatised milk-based fluid beverages and their mixes, excluding mixes for cocoa (cocoa-sugar mixtures, category 5.1.1) such as hot chocolate, chocolate malt drinks, strawberry-flavoured yoghurt drink, whey based drinks, lactic acid bacteria drinks, and lassi (liquid obtained by whipping curd from the lactic acid fermentation of milk, and mixing with sugar or synthetic sweetener)]

1.2 Fermented and renneted milk products (plain), excluding food category 1.1.2 dairy-based drinks)

Includes all plain products based on skim, part-skim, low-fat and whole milk. Flavoured products are included in 1.1.2 (beverages) and 1.7 (desserts).

1.2.1 Fermented milks (plain)

Includes all plain products, including fluid fermented milk, acidified milk and cultured milk. Plain yoghurt, which does not contain flavours or colours, may be found in one of the sub-categories of 1.2.1 depending on whether it is heat-treated after fermentation or not.

1.2.1.1 Fermented milks (plain), not heat-treated after fermentation

Includes fluid and non-fluid plain products such as yoghurt.

1.2.1.2 Fermented milks (plain), heat-treated after fermentation

Products similar to that in 1.2.1.1 except those heat-treated (e.g. sterilized or pasteurized) after fermentation.

1.2.2 Renneted milk (plain)

Plain, coagulated milk produced by the action of milk coagulating enzymes which includes curdled milk. Flavoured - renneted milk products are found in category 1.7.

1.3 Condensed milk and analogues (plain)

Includes plain and sweetened types of condensed milk, evaporated milk**,** and their analogues (including beverage whiteners) and products based on skim, part-skim, low-fat and whole milk, blends of evaporated skimmed milk and vegetable fat, and blends of sweetened condensed skimmed milk and vegetable fat.

1.3.1 Condensed milk (plain)

Condensed milk is obtained by partial removal of water from milk to which sugar may have been added. For evaporated milk, the water removal may be accomplished by heating. Includes partially dehydrated milk, evaporated milk, sweetened condensed milk, and khoya (cow or buffalo milk concentrated by boiling).

1.3.2 Beverage whiteners

1.3.2.1 [52]**[****]**

1.3.2.2 Non-Dairy based beverage whitener

Milk or cream substitute consisting of a vegetable fat-water emulsion in water with milk protein and lactose or vegetable proteins for use in beverages such as coffee and tea and includes the same type of products in powdered form. Includes condensed milk analogues, blends of evaporated skimmed milk and vegetable fat and blends of sweetened condensed skimmed milk and vegetable fat.

1.4 Cream (plain) and the like

Cream is a fluid dairy product, relatively high in fat content in comparison to milk. Includes all plain fluid, semi-fluid and semi-solid cream and cream analogue products. Flavoured cream products are found in1.1.2 (beverages) and 1.7 (desserts).

1.4.1 Pasteurized cream (plain)

Cream subjected to pasteurization by appropriate heat treatment or made from pasteurized milk. Includes milk cream and “half-and-half.”

1.4.2 Sterilized and UHT creams, whipping and whipped creams, and reduced fat creams (plain)

Includes every cream, regardless of fat content, which has undergone a higher heat-treatment than pasteurization, pasteurized creams with a reduced fat content, as well as every cream intended for whipping or being whipped. Sterilized cream is subjected to appropriate heat-treatment in the container in which it is presented to the consumer. Ultra-heat treated (UHT) or ultra-pasteurized cream is subjected to the appropriate heat treatment (UHT or ultra-pasteurization) in a continuous flow process and aseptically packaged. Cream may also be packaged under pressure (whipped cream). Includes whipping cream, heavy cream, whipped pasteurized cream, and whipped cream-type dairy toppings and fillings. Creams or toppings with partial or total replacement of milk fat by other fats are included in sub-category 1.4.4 (cream analogues).

1.4.3 Clotted cream (plain)

Thickened, viscous cream formed from the action of milk coagulating enzymes. Includes sour cream (cream subjected to lactic acid fermentation achieved as described for buttermilk (1.1.1.2).

1.4.4 Cream analogues

Cream substitute consisting of a vegetable fat-water emulsion in liquid or powdered form for use other than as a beverage whitener (1.3.2).Includes instant whipped cream toppings and sour cream substitutes.

1.5 Milk powder and cream powder and powder analogues (plain)

Includes plain milk powders, cream powders, or combination of the two, and their analogues.Includes products based on skim, part-skim, low-fat and whole milk.

1.5.1 Milk powder and cream powder (plain)

Milk products obtained by partial removal of water from milk or cream and produced in a powdered form. Includes casein and caseinates.

[52][**1.5.1.1 Dairy based dairy whitener**

Milk or cream constituting of milk protein and lactose]

1.5.2 Milk and cream powder analogues

Products based on a fat-water emulsion and dried for use other than as a beverage whitener (1.3.2).Examples include imitation dry cream mix and blends of skimmed milk and vegetable fat in powdered form.

1.6 Cheese and analogues

Cheese and cheese analogues are products that have water and fat included within a coagulated milkproteinstructure. Products such as cheese sauce (12.6.2), cheese-flavoured snacks (15.1), and

composite prepared foods containing cheese as an ingredient (e.g. macaroni and cheese; 16.0) are categorized elsewhere.

1.6.1 Unripened cheese

Unripened cheese, including fresh cheese, is ready for consumption soon after manufacture. Such as cottage cheese (a soft, unripened, coagulated curd cheese), creamed cottage cheese (cottage cheese covered with a creaming mixture), cream cheese (rahmfrischkase, an uncured, soft spreadable cheese) mozzarella and scamorza cheeses and paneer (milk protein coagulated by the addition of citric acid from lemon or lime juice or of lactic acid from whey, that is strained into a solid mass, and is used in vegetarian versions of, e.g. hamburgers). Includes the whole unripened cheese and unripened cheese rind (for those unripened cheeses with a "skin" such as mozzarella)**.** Most products are plain, however, some such as cottage cheese and cream cheese, may be flavoured or contain ingredients such as fruit, vegetablesor meat. Excludes ripened cream cheese, where cream is a qualifier for a high fat content.

1.6.2 Ripened cheese

Ripened cheese is not ready for consumption soon after manufacture, but is held under such time and temperature conditions so as to allow the necessary biochemical and physical changes that characterize the specific cheese. For mould-ripened cheese, the ripening is accomplished primarily by the development of characteristic mould growth throughout the interior and/or on the surface of the cheese. Ripened cheese may be soft (e.g. camembert), firm (e.g. edam, gouda), hard (e.g. cheddar), or extra-hard and includes cheese in brine, which is a ripened semi-hard to soft cheese, white to yellowish in colour with a compact texture, and Without actual rind that has been preserved in brine until presented to the consumer.

1.6.2.1 Ripened cheese, includes rind

Refers to ripened (including mould-ripened) cheese, including rind, or any part thereof, such as cut, shredded, grated or sliced cheesesuch as blue cheese, brie, gouda, havarti, hard grating cheese, and Swiss cheese.

1.6.2.2 Rind of ripened cheese

Refers to the rind only of the cheese and the rind of the cheese is the exterior portion of the cheese mass that initially has the same composition as the interior portion of the cheese, but which may dry after brining and ripening.

1.6.2.3 Cheese powder

Dehydrated product prepared from a variety or processed cheese. Does not include grated or shredded cheese (1.6.2.1 for variety cheese; 1.6.4 for processed cheese). Product is intended either to be reconstituted with milk or water to prepare a sauce, or used as-is as an ingredient (e.g. with cooked macaroni, milk and butter to prepare a macaroni and cheese casserole). Includes spray-dried cheese.

1.6.3 Whey cheese

A solid or semi-solid product obtained by concentration of whey with or without the addition of milk, cream or other materials of milk origin and moulding of the concentrated product which includes the whole cheese and the rind of the cheese and it is different from whey protein cheese (1.6.6).

1.6.4 Processed cheese

Product with a very long shelf life obtained by melting and emulsifying cheese which includes products manufactured by heating and emulsifying mixtures of cheese, milk fat, milk protein, milk powder, and water indifferent amounts. Products may contain other added ingredients, such as aromas, seasonings and fruit, vegetables and/or meat. Product may be spreadable or cut into slices and pieces. The term "processed" does not mean cutting, grating, shredding, etc. of cheese. Cheeses treated by these mechanical processesare included under food category 1.6.2 (Ripened cheese).

1.6.4.1 Plain processed cheese

Processed cheese product that does not contain added flavours, seasonings, fruit, vegetables and/or meat.Examples include American cheese, Requeson etc.

1.6.4.2 Flavoured processed cheese, including containing fruit, vegetables, meat, etc.

Processed cheese product that contains added flavours, seasonings, fruit, vegetables and/or meat such asNeufchatel cheese spread with vegetables, pepper jack cheese, cheddar cheese spread with wine, and cheese balls (formed processed cheese coated in nuts, herbs or spices).

1.6.5 Cheese analogues

Products that look like cheese, but in which milk fat has been partly or completely replaced by other fats which includes imitation cheese, imitation cheese mixes, and imitation cheese powders.

1.6.6 Whey protein cheese

Product containing the protein extracted from the whey component of milk. These products are principally made by coagulation of whey proteins. Example: ricotta cheese. It is different from whey cheese (1.6.3).

1.7 Dairy-based desserts

Includes ready-to-eat flavoured dairy dessert products and dessert mixes, frozen dairy confections and novelties, and dairy-based fillings. Includes flavoured yoghurt (a milk product obtained by fermentation of milk and milk products to which flavours and ingredients (e.g. fruit, cocoa, coffee) have been added) that may or may not be heat-treated after fermentation. Other examples include ice cream (frozen dessert that may contain whole milk, skim milk products, cream or butter, sugar, vegetable oil, egg products, and fruit,cocoa, or coffee), ice milk (product similar to ice cream with reduced whole or skim milk content, or made withnon-fat milk), jellied milk, frozen flavoured yoghurt, junket (sweet custard-like dessert made from flavoured milk set with rennet), dulce de leche (cooked milk with sugar and added ingredients such as coconut or chocolate),butterscotch pudding and chocolate mousse. Includes traditional milk-based sweets prepared from milk concentrated partially, from khoya (cow or buffalo milk concentrated by boiling), or chhena(cow or buffalo milk, heat coagulated aided by acids like citric acid, lactic acid, malic acid, etc), sugar orsynthetic sweetener, and other ingredients (e.g. *maida* (refined wheat flour), flavours and colours (e.g.

peda,burfee, milk cake, gulab jamun, rasgulla, rasmalai, basundi). These products are different from those in food category3.0 (edible ices, including sherbet and sorbet) in that the foods in category 1.7 are dairy-based, while those in 3.0 are water-based and contain no dairy ingredients.

1.8 Whey and whey products, excluding whey cheeses
Includes a variety of whey-based products in liquid and powdered forms.

1.8.1 Liquid whey and whey products, excluding whey cheeses
Whey is the fluid separated from the curd after coagulation of milk, cream, skimmed milk or buttermilk with milk coagulating enzymes during the manufacture of cheese, casein or similar products. Acid whey is obtained after the coagulation of milk, cream, skimmed milk or buttermilk, mainly with acids of the type used for the manufacture of fresh cheese.

1.8.2 Dried whey and whey products, excluding whey cheeses
Whey powders are prepared by spray- or roller-drying whey or acid whey from which the major portion of themilkfat has been removed.

2.0 Fats and oils, and fat emulsions
Includes all fat-based products that are derived from vegetable, animal or marine sources, or their mixtures.

2.1 Fats and oils essentially free from water
Edible fats and oils are foods composed mainly of triglycerides of fatty acids from vegetable, animal or marine sources.

2.1.1 Butter oil, anhydrous milk fat, ghee
The milk fat products anhydrous milk fat, anhydrous butter oil and butter oil are products derived exclusively from milk and/or products obtained from milk by a process that almost completely removes water and nonfatsolids. Ghee is a product obtained exclusively from milk, cream or butter by a process that almost completely removes water and non-fat solids; it has a specially developed flavour and physical structure.

2.1.2 Vegetable oils and fats
Edible fats and oils obtained from edible plant sources. Products may be from a single plant source or marketed and used as blended oils that are generally designated as edible, cooking, frying, table or salad oils. Virgin oils are obtained by mechanical means (e.g. pressing or expelling), with application of heat only so as not to alter the natural composition of the oil. Virgin oils are suitable for consumption in the natural state. Cold pressed oils are obtained by mechanical means without application of heat. Examples include virgin olive oil, cottonseed oil, peanut oil, and vanaspati.

2.1.3 Lard, tallow, fish oil, and other animal fats

All animal fats and oils should be derived from animals in good health at the time of slaughter and intended for human consumption.

2.2 Fat emulsions mainly of type water-in-oil
Include all emulsified products excluding fat-based counterparts of dairy products and dairy desserts.

2.2.1 Butter
Butter is a fatty product consisting of a primarily water-in-oil emulsion derived exclusively from milk or products obtained from milk or both.

2.2.2 Fat spreads, dairy fat spreads and blended spreads
Includes fat spreads (emulsions principally of the type water and edible fats and oils), dairy fat spreads (emulsions principally of the type water-in-milk fat), and blended spreads (fat spreads blended with higher amounts of milk fat)such as margarine (a spreadable or fluid water-in-oil emulsion produced mainly from edible fats and oils); products derived from butter (e.g. "butterine," a spreadable butter blend with vegetable oils), blends of butter and margarine; and minarine (a spreadable water-in-oil emulsion produced principally from water and edible fats and oils that are not solely derived from milk). Also includes reduced fat-based products derived from milk fat or from animal or vegetable fats**,** including reduced-fat counterparts of butter, margarine, and their mixtures.

2.3 Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions
Includes fat-based counterparts of dairy-based foods excluding dessert products. The fat portion of these products are derived from sources other than milk fat (e.g. vegetable fats and oils) such as imitation milk (a fat-substituted milk produced from non-fat milk solids by addition of vegetable fats (coconut, safflower or corn oil)); non-dairy whipped cream; non-dairy toppings; and vegetable cream. Mayonnaise is included in food category 12.6.1.

2.4 Fat-based desserts excluding dairy-based dessert products of food category 1.7
Includes fat-based counterparts of dairy-based desserts, which are found in category 1.7.Includes ready-to-eat products and their mixes, cocoa based spreads including fillings. Also includes non-dairy fillings for desserts. Examples include ice cream-like products made with vegetable fats

3.0 Edible ices, including sherbet and sorbet
This category includes water-based frozen desserts, confections and novelties, such as fruit sorbet, and flavoured ice. Frozen desserts containing primarily dairy ingredients are included in food category1.7.

4.0 Fruits and vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

This major category is divided into two categories: 4.1(Fruit) and 4.2 (Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds). Each of these categories is further divided into sub-categories for fresh and processed products.

4.1 Fruits

Includes all fresh (4.1.1) and processed (4.1.2) products.

4.1.1 Fresh fruits

Fresh fruit is generally free of additives.

4.1.1.1 Untreated fresh fruits

Raw fruit presented fresh from harvest.

4.1.1.2 Surface-treated fresh fruits

The surfaces of certain fresh fruit are coated with glazes or waxes or are treated with other food additives that act as protective coatings and/or help to preserve the freshness and quality of the fruit such as apples, oranges, dates, and longans.

[52][4.1.1.3 Peeled or cut, minimally processed fruit]

Fresh fruit that is cut or peeled and presented to the consumer, e.g. in a fruit saladand includes fresh shredded or flaked coconut.

4.1.2 Processed fruits

Includes all forms of processing other than peeling, cutting and surface treating fresh fruits.

4.1.2.1 Frozen fruits

Fruits that may or may not be blanched prior to freezing. The product may be frozen in a juice or sugar syrup. Such as frozen fruit salad and frozen strawberries.

4.1.2.2 Dried fruits, nuts and seeds

Fruit from which water is removed to prevent microbial growth which includes dried fruit leathers (fruit rolls)prepared by drying fruit purees. Such as cashew nut, almond, raisins, dried apple slices, figs, copra (dried coconut whole or cut), dried shredded or flaked coconut, prunes, dehydrated fruits etc.

4.1.2.3 Fruits in vinegar, oil, or brine

Includes pickled products such as mango pickles, lime pickles, pickled gooseberries, plumsand pickled watermelon rind. Oriental pickled (“cured” or “preserved”) fruit products are sometimes referred to as “candied” fruits. These are not the candied fruit products of category 4.1.2.7 (i.e. dried, sugar coated fruits).

4.1.2.4 Canned or bottled (pasteurized) fruits

Fully preserved product in which fresh fruit is cleaned and placed in cans or jars with natural juice or sugar syrup (including artificially sweetened syrup) and heat-sterilized or pasteurized. Includes products processed in retort pouches such as canned fruit salad, and applesauce in jars.

4.1.2.5 Jams, jellies, marmalades

Jams, preserves and conserves are thick, spreadable products prepared by boiling whole fruit or pieces of fruit, fruit pulp or puree, with or without fruit juice or concentrated fruit juice, and sugar to thicken, and to which pectin and fruit pieces may be added. Jelly is a clear spreadable product prepared similarly to jam, except that it is has a smoother consistency and does not contain fruit pieces. Marmalade is a thick spreadable fruit slurry prepared from whole fruit, fruit pulp or puree (usually citrus), and boiled with sugar to thicken, to which pectin and fruit pieces and fruit peel pieces may be added. Includes dietetic counterparts made with non-nutritive high-intensity sweeteners. Examples include orange marmalade, grape jelly, and strawberry jam.

4.1.2.6 Fruit-based spreads (e.g. chutney) excluding products of food category 4.1.2.5

Includes fruit based spreads, condiment-type fruit products such as mango chutney, raisinchutney, fruit and vegetables chutneys and their mixes (dry or paste form).

4.1.2.7 Candied fruits

Includes glazed fruits (fruits treated with a sugar solution and dried), candied fruits (dried glazed fruit immersed in a sugar solution and dried so that the fruit is covered by a candy-like sugar shell), and crystallized fruit is prepared (dried glazed fruit rolled in icing or granulated sugar and dried).

4.1.2.8 Fruit preparations, including pulp, purees, fruit toppings and coconut milk

Fruit pulp is not usually intended for direct consumption. It isaslurry of lightly steamed and strained fresh fruit, with or without added preservatives. Fruit puree (e.g. mango puree, prune puree) is produced in the same way, but has a smoother, finer texture, and may be used as fillings for pastries, but is not limited to this use. Fruit sauce (e.g. pineapple sauce or strawberry sauce) is made from boiled fruit pulp with or without added sweeteners and may contain fruit pieces. Fruit sauce may be used as toppings for fine bakery wares and ice cream sundaes. Fruit syrup (e.g. blueberry syrup) is a more liquid form of fruit sauce that may be used as a topping e.g. for pancakes. Non-fruit toppings are included in category 5.4 (sugar- and chocolate-based toppings) and sugar syrups (e.g. maple syrup) are included in category 11.4. Coconut milk and coconut cream are products prepared using a significant amount of separated, whole, disintegrated, macerated or comminuted fresh endosperm (kernel) of coconut palm and expelled, where most filterablefibers and residues are excluded, with or without coconut water, and/or with additional water. Coconut milk and coconut cream are treated by heat pasteurization, sterilization or ultrahigh temperature (UHT) processes. Coconut milk and coconut cream may also be produced in concentrated or skim (or “light”)forms. Examples of traditional foods in this sub-category are tamarind concentrate (clean extract of tamarind fruit with not less than 65% total soluble solids), tamarind powder (tamarind paste mixed with tapioca starch), tamarind toffee (mixture of tamarind pulp, sugar, milk solids, antioxidants, flavours, stabilizers and preservatives), and fruit bars (a mixture of fruit (mango, pineapple, or guava) pulp mixed with sugar, flavours and preservatives, dried into a sheet).

4.1.2.9 Fruit-based desserts, including fruit-flavoured water-based desserts
Includes ready-to-eat products and mixes. Includes rote gruze, frutgrod, fruit compote, nata de coco, and *mitsumame* (desserts of agar jelly, fruit pieces and syrup) etc. This category does not include fine bakery wares containing fruit (categories 7.2.1 and 7.2.2), fruit-flavoured edible ices (category 3.0), or fruit-containing frozen dairy desserts (category 1.7).

4.1.2.10 Fermented fruit products
Type of pickled product produced by preservation in salt by lactic acid fermentation. Examples include fermented plums, amla/mango pickles etc.

4.1.2.11 Fruit fillings for pastries
Includes ready-to-eat products and mixes and all type of fillings excluding purees (category4.1.2.8). These fillings usually include whole fruit or fruit pieces such as cherry pie filling and raisin filling for oatmeal cookies.

4.1.2.12 Cooked fruits
Fruit that is steamed, boiled, baked, or fried, with or without a coating, for presentation to the consumer such as baked apples, fried apple rings, and peach dumplings (baked peaches with a sweet dough covering).

4.2 Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds
Includes all fresh (4.2.1) and processed (4.2.2) products.

4.2.1 Fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds
Fresh vegetables are generally free of additives.

4.2.1.1 Untreated fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes (including soybeans), and aloe vera), seaweeds, and nuts and seeds
Raw vegetables presented fresh from harvest.

4.2.1.2 Surface-treated fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds
The surfaces of certain fresh vegetables are coated with glazes or waxes or are treated with other food additives that act as protective coatings and/or help to preserve the freshness and quality of the vegetable such as avocados, cucumbers, green peppers and pistachio nuts.

[52]**[4.2.1.3 Peeled, cut or shredded minimally processed vegetables [(including mushrooms and fungi, roots and tubers, fresh pulses and legumes, and aloevera) sea weeds, nuts and seeds]**
Fresh vegetables, e.g. peeled raw potatoes that are presented to the consumer to be cooked at home (e.g.in the preparation of hash brown potatoes).

4.2.2 Processed vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

Includes all forms of processing other than peeling, cutting and surface treating of fresh vegetables.

4.2.2.1 Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

Fresh vegetables are usually blanched and frozen. Examples include quick-frozen corn, quick-frozen French-fried potatoes, quick frozen peas, and quick frozen whole processed tomatoes.

4.2.2.2 Dried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

Products in which the natural water content has been reduced below that critical for growth of microorganismswithout affecting the important nutrients. The product may or may not be intended for rehydration prior to consumption. Includes vegetable powders that are obtained from drying the juice, such as tomato powder and beet powder etc such as dried potato flakes, dehydrated carrots or peas or cabbage or mushroom or spinach leaf or lentil etc.

4.2.2.3 Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweeds in vinegar, oil, brine, or soybean sauce

Products prepared by treating raw vegetables with salt solution excluding fermented soybeanproducts. Fermented vegetables, which are a type of pickled product, are classified in4.2.2.7. Fermented soybean products are classified in 6.8.6, 6.8.7, 12.9.1, 12.9.2.1 and 12.9.2.3 such as pickled cabbage, pickled cucumber, olives, pickled onions, mushrooms in oil, marinated artichoke hearts, acharetc.Other examples include pickled ginger, pickled garlic, and chilli pickles etc.

4.2.2.4 Canned or bottled (pasteurized) or retort pouch vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweeds

Fully preserved product in which fresh vegetables are cleaned, blanched, and placed in cans or jars in liquid (e.g. brine, water, oil or sauce), and heat-sterilized or pasteurized such as canned peas, canned baby corn, asparagus packed in glass jars, canned and/or cooked/baked beans, canned tomato paste/ puree (low acid), and canned tomatoes (pieces, wedges or whole), canned mushrooms, canned chestnuts etc.

Amendment for substitution of highlighted provision

[77][Fully preserved product in which fresh vegetables are cleaned, blanched, and placed in cans or jars in liquid (e.g. brine, water, oil or sauce), and heat-sterilized or pasteurized such as canned peas, canned baby corn, asparagus packed in glass jars, canned and/or cooked/baked beans, canned tomato paste/ puree and canned tomatoes (pieces, wedges or whole), canned mushrooms, canned chestnuts etc.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

4.2.2.5 Vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweed, and nut and seed purees and spreads (e.g. peanut butter)

Vegetable purees are finely dispersed slurries prepared from the concentration of vegetables, which may have been previously heat-treated (e.g. steamed). The slurries may be filtered prior to packaging. Purees contain lower amounts of solids than pastes (found in category 4.2.2.6). Examples include tomato puree, peanut butter (a spreadable paste made from roasted and ground peanuts by the addition of peanut oil) and other nut butters (e.g. cashew butter) etc.

4.2.2.6 Vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweed, and nut and seed pulps and preparations (e.g. vegetable desserts and sauces, candied vegetables) other than food category 4.2.2.5

Vegetable pastes and pulps are prepared as described for vegetable purees (category 4.2.2.5). However, pastes and pulps have a higher amount of solids, and are usually used as components of other foods (e.g. sauces)such as potato pulp, horseradish pulp, aloe extract, salsa (e.g. chopped tomato, onion, peppers, spices and herbs), sweet red bean paste (*an*), sweet coffee bean paste (filling), tomato paste, tomato pulp, tomato sauce, crystallized ginger, and bean-based vegetable dessert, sweets (vegetable based):- carrot halwa (gajar halwa/ gajrela), lauki halwa, coconut based sweets like coconut burfee, kaju based sweets etc.

4.2.2.7 Fermented vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweed products, excluding fermented soybean products of food category 6.8.6, 6.8.7, 12.9.1, 12.9.2.1 and 12.9.2.3

Fermented vegetables are a type of pickled product, formed by the action of lactic acid bacteria, usually in the presence of salt. Traditional Oriental fermented vegetable products are prepared by air-drying vegetables and exposing them to ambient temperatures so as to allow the microorganisms to flourish; the vegetables are then sealed in an anaerobic environment and salt (to generate lactic acid), spices and seasonings are added such as achar, pickled cabbage or carrot or cauliflower, pickled cucumber, olives, pickled onions, mushrooms in oil, marinated artichoke hearts, piccalilli, lemon pickles, soybean sauce-pickled vegetables , vinegar-pickled vegetables, brine-pickled vegetables, pickled ginger, pickled garlic, and chilli pickles, red pepper paste, fermented vegetable products, kimchi and sauerkraut (fermented cabbage) etc. Excludes fermented soybean products that are found in food categories6.8.6 (fermented soybeans (e.g. *natto* and *tempe*), 6.8.7 (fermented soybean curd), 12.9.1(fermented soybean paste e.g. *miso*), 12.9.2.1 (fermented soybean sauce), and 12.9.2.3 (other soybean sauce) etc.

4.2.2.8 Cooked or fried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweeds

Vegetables those are steamed, boiled, baked, or fried, with or without a coating, for presentation to the consumer such as simmered beans, pre-fried potatoes, fried okra, and ready-to-eat curries like paneer makhani, kadhaipaneer, palakpaneer, baigan-ka-bharta, alootamatar, mixed vegetable, dal makhani, frozen curried vegetables /ready-to-eat vegetables; vegetable gravies, vegetables boiled down in soy sauceetc.

5.0 Confectionery

Includes all cocoa and chocolate products (5.1), other confectionery products that may or may not contain cocoa (5.2), chewing gum (5.3), and decorations and icings (5.4), or foods produced solely with any combination of foods conforming to these sub-categories.

5.1 Cocoa products and chocolate products including imitations and chocolate substitutes

This category is divided to reflect the variety of standardized and non-standardized cocoa- and chocolatebasedproducts.

5.1.1 Cocoa mixes (powders) and cocoa mass/cake

Includes a variety of products that are used in the manufacture of other chocolate products or in the preparation of cocoa-based beverages. Most cocoa products have their origin in the cocoa nib, which is obtained from cocoa beans that have been cleaned and freed from the shells. Cocoa mass is obtained from the mechanical disintegration of the nib. Depending on the desired finished chocolate product, the cocoa nib or mass may be treated by an alkalinization process that mellows the flavour. Cocoa dust is the fraction of the cocoa bean produced as a product during winnowing and degerming. Cocoa powder is produced byreducing the fat content of cocoa mass or liquor by pressing (including expeller pressing) and molding into cocoa press cake. The cocoa press cake is disintegrated and ground to cocoa powder. Cocoa liquor is ahomogeneous flowing paste produced from cocoa nib, which has been roasted, dried, disintegrated and milled. Cocoa-sugar mixtures contain only cocoa powder and sugar. Chocolate powder for beverages is made from cocoa liquor or cocoa powder and sugar etc.Examples include drinking chocolate powder; breakfast cocoa; cocoa dust (fines), nibs, mass, press cake;chocolate liquor; cocoa mixes (powders for preparing the hot beverage); cocoa-sugar mixture; and dry mixes for sugar-cocoa confectionery. Finished cocoa beverages and chocolate milk are included in category 1.1.2, and most finished chocolate products are included in category 5.1.4.

5.1.2 Cocoa mixes (syrups)

Products that may be produced by adding a bacterial amylase to cocoa liquor. The enzyme prevents the syrup from thickening or setting by solubilizing and dextrinizing cocoa starch. Includes products such as chocolate syrup used to prepare chocolate milk or hot chocolate. Chocolate syrup differs from fudge sauce(e.g. for ice cream sundaes), which is found in category 5.4.

5.1.3 Cocoa and chocolate products

Chocolate is produced from cocoa nibs, mass, press cake, powder, or liquor with or without addition of sugar, cocoa butter, aroma or flavouring substances, and optional ingredients (e.g. nuts). This category is for chocolate as defined in these regulations, and for confectionery that uses chocolate that meets the standard and may contain other ingredients, for example chocolate-covered nuts and fruit (e.g. raisins). This category includes only the chocolate portion of any confectionery within the scope of food category 5.2. Examples include cocoabutter confectionery (composed of cocoa butter, milk solids and sugar), white chocolate, chocolate chips, milk chocolate, cream chocolate, sweet

chocolate, bitter chocolate, enrobing chocolate, chocolate covered in a sugar-based “shell” or with coloured decorations, filled chocolate (chocolate with a texturally distinctcentre and external coating, excluding flour confectionery and pastry products of categories 7.2.1and 7.2.2) and chocolate with added edible ingredients. This category does not include yoghurt-, cereal-, and honey-covered nuts (category 15.2).

[52][5.1.4 Imitation chocolate, chocolate substitute products]

Includes chocolate-like products that may or may not be cocoa-based, but have similar organolepticproperties as chocolate, such as carob chips, and cocoa-based products that contain greater than 5% vegetable fat (other than cocoa butter) that are excluded from the scope of the *Standard for Chocolate.* These chocolate-like products may contain additional optional ingredients and may include filled confectionery. This category includes only the chocolate-like portion of any confectionery within the scope of food category 5.2.

5.2 Confectionery including hard and soft candy, nougats, etc. other than food categories 5.1, 5.3, and 5.4

Includes all types of products that primarily contain sugar and their dietetic counterparts, and may or may not containcocoa.Includes hard candy (5.2.1), soft candy (5.2.2), and nougats and marzipans (5.2.3).

[52]**[5.2.1 Hard candy**

Products made from water and sugar (simple syrup), colour and flavour that may or may not have a filling, their dietetic counterparts, and products that may or may not contain cocoa. Includes: pastilles and lozenges (rolled, shaped and filled sweetened candy). These types of products may be used as fillings for chocolate products within the scope of food categories 5.1.3 and 5.1.4.

5.2.2 Soft candy

Products include soft, chewy products such as caramels (containing sugar syrup, fats, colour and flavour)and their dietetic counterparts; products that may or may not contain cocoa and milk (e.g. toffees and chocolate-flavoured caramels); jelly-based candies (e.g. jelly beans, jellied fruit paste covered in sugar, made from pectin, colour and flavour); and licorice. Also included are halwa, and oriental specialties, such as sweet bean jelly etc. These types of products may be used as fillings for chocolate products within the scope of food categories 5.1.3 and 5.1.4.

5.2.3 Nougats and Marzipans

Nougats consist of roasted ground nuts, sugar and cocoa and their dietetic counterparts, that may be consumed as is, or may be used as a filling for chocolate products within the scope of food categories 5.1.3 and 5.1.4. Marzipan consists of almond paste and sugar and their dietetic counterparts that may be shaped and coloured for direct consumption, or may be used as a filling for chocolate products within the scope of food categories 5.1.3 and 5.1.4.]

5.3 Chewing gum

Product made from natural or synthetic gum base containing flavours, sweeteners (nutritive or non-nutritive), aroma compounds, and other additives. Includes bubble gum and breath-freshener gum products.

5.4 Decorations, toppings (non-fruit) and sweet sauces
Includes ready-to-eat icings and frostings for cakes, cookies, pies and bread and flour confectionery, as well as mixes for these products. Also includes sugar- and chocolate-based coatings for baked goods. Sweet sauces and toppings include butterscotch sauce for use, e.g. on ice cream. These sweet sauces are different than the syrups (e.g. maple, caramel, and flavoured syrups for fine bakery wares and ices) included in category 11.4. Fruit-based toppings are included in 4.1.2.8. Chocolate sauce is included in 5.1.2.

6.0 Cereals and cereal products derived from cereal grains, roots and tubers, pulses, legumes and pith or soft core of palm tree, excluding bakery wares of food category 7.0
Includes unprocessed (6.1) and various processed forms of cereal and cereal-based products.

6.1 Whole, broken, or flaked grain, including rice
Includes whole, husked, unprocessed cereals and grains. Examples include rice (including enriched, instant and parboiled), wheat, corn (maize), sorghum, barley, oats, millets, dried peas or legumes etc.

6.2 Flours and starches (including soybean powder)
The basic milled products of cereal grains, roots, tubers, pulses, pith or softy core of palm tree or legumes sold as such or used as ingredients (e.g. in baked goods).

6.2.1 Flour
Flour is produced from the milling of grain, cereals and tubers (e.g. cassava) and seeds, pith or soft core of palm tree. Includes flour pastes for bread and flour confectionery, flour for bread, pastries, noodles and pasta, and flour mixes (physical mixtures of flours from different cereal or grain sources, which are different from mixes for bakery goods (dry mixes containing flour and other ingredients, categories 7.1.6 (mixes for ordinary bakery wares) and 7.2.3 (mixes for fine bakery wares) such as Atta, besan, suji, durum wheat flour, self-rising flour, enriched flour, instantized flour, corn flour, corn meal, kuttu-ka-atta, singhade-ka-atta, roasted soybean flour,konjac flour, and maida (refined wheat flour) and sago flour.

6.2.2 Starches
Starch is a glucose polymer occurring in granular form in certain plant species, notably seeds (e.g. cereals, pulses, corn, wheat, rice, beans, peas) and tubers (e.g. tapioca, potato). The polymer consists of linkedanhydro-alpha-D-glucose units. Native starch is separated by processes that are specific for each raw material.

6.3 Breakfast cereals, including rolled oats

Includes all ready-to-eat, instant, and regular hot breakfast cereal products. Examples include granola-type breakfast cereals, instant oatmeal, corn flakes, puffed wheat or rice or other cereals (puffed, pounded, popped) like poha, kheel, popcorn, multi-grain (e.g. rice, wheat and corn) breakfast cereals, breakfast cereals made from soy or bran, and extruded-type breakfast cereals made from grain flour or powder etc.

6.4 Pastas and noodles and like products

Includes all pasta, noodles and similar products e.g. rice paper, rice vermicelli, soybean pastas and noodles.

6.4.1 Fresh pastas and noodles and like products

Products that are untreated (i.e. not heated, boiled, steamed, cooked, pre-gelatinized or frozen) and are no dehydrated. These products are intended to be consumed soon after preparation. Examples include unboiled noodles, and "skins" or crusts for spring rolls, wontons, and *shuo mai*.

6.4.2 Dried pastas and noodles and like products

Products that are untreated (i.e. not heated, boiled, steamed, cooked, pre-gelatinized or frozen) and are dehydrated. Examples include dried forms of: spaghetti, bean vermicelli, rice vermicelli, macaroni, and rice noodles.

6.4.3 Pre-cooked pastas and noodles and like products

Products that are treated (i.e. heated, boiled, steamed, cooked, pre-gelatinized or frozen). These products may be sold directly to the consumer (e.g. pre-cooked, chilled gnocchi to be heated prior to consumption), or may be the starch component of prepared meals (e.g. heat-and-serve frozen dinner entrees containing spaghetti, macaroni or noodles; canned spaghetti and meatballs entrée). Also includes instant noodles, e.g. pre-cooked ramen, udon, rice noodles, that are pre-gelatinized, heated and dried prior to sale to the consumer.

6.5 Cereal and starch based desserts

Dessert products containing cereal, starch or grain as the main ingredient. Also includes cereal- or starch based fillings for desserts such as rice pudding, semolina pudding, tapioca pudding, gujiya, balusahi, soan-papdi, patisa, malpua, and starchy pudding based desserts, cereal based desserts, suji or moong dal halwa, jalebi, boondiladdoo, motichoorladdoo, mysorepak, emarti, modak,rice flourdumplings, steamed yeast-fermented wheat flour dough desserts, starchy pudding based dessertsetc.

6.6 Batters

Products containing flaked or ground cereal or grain that when combined with other ingredients (e.g. water, milk, egg, fats, milk solids, spices, seasonings etc.)may be used as a coating for fish or poultry and includes products sold as dry mix of cereal or grain component. Examples include idli or vada or dosa batters, upma, idli or vada or dosa mixes, pongal mix, sattu, etc., batters for breading or batters for fish or poultry etc. Doughs (e.g. for bread) are found in 7.1.4, and other mixes (e.g. for bread or cakes) are found in 7.1.6 and 7.2.3, respectively.

6.7 Pre-cooked or processed cereal/grain/legume products

Fermented or non fermented products prepared from cereals and/or pulse. Including processed cereals, cereal or malt-based food or beverage and/or pulse and enriched cereals and/or pulse products, such as poha, upma, idli, vada, dhokla, khandvi, papad etc. Products prepared from rice that is soaked, drained, steamed, kneaded and shaped into cake forms. Crisp snacks made from rice grains, also called "rice cakes" are categorized in 15.1, and dessert-type rice cakes are in 6.5. Category 6.7 would also include processed rice and enriched rice products, such as pre-cooked products that are sold canned, chilled or frozen; and processed rice products sold in retort pouches. This is to distinguish from category 6.1 (Whole, broken, or flaked grain, including rice) that is intended to include only whole, husked, unprocessed cereals and grains.

6.8 Soybean products (excluding soybean-based seasonings, and condiments of food category 12.9)

Includes dried, cooked, fried or fermented soybean products, and soybean curd products.

6.8.1 Soybean-based beverages

Products prepared from dried soybeans that are soaked in water, pureed, boiled and strained, or prepared fromsoybean flour, soybean concentrate, or soybean isolate. Also includes soybean products, such as soybean-based beverage powder.

6.8.2 Soybean-based beverage film

Film formed on the surface of boiling soybean-based beverage that is dried. It may be deep-fried or softened in water prior to use in soups or poached food.

6.8.3 Soybean curd (tofu)

Soybean curd is prepared from dried soybeans that are soaked in water, pureed, and strained to produce soybean-based beverages, which is then made into a curd with a coagulant, and placed in a mould. Soybean curds may be of a variety of textures (e.g. soft, semi-firm, firm).

6.8.4 Semi-dehydrated soybean curd

Soybean curd that has been pressed while being moulded into blocks so that some moisture has been removed, but so that it is not completely dried (see food category 6.8.5). Semi-dehydrated soybeancurd typically contains 62% water, and has a chewy texture.

6.8.4.1 Thick gravy-stewed semi-dehydrated soybean curd

Partially dehydrated soybean curd that is cooked (stewed) with a thick sauce (e.g. miso sauce). The partially dehydratedsoybean curd typically absorbs the sauce, and so regains its original texture.

6.8.4.2 Deep fried semi-dehydrated soybean curd

Partially dehydrated soybean curd that is deep-fried. It may be consumed as such, or cooked (e.g. stewed in sauce) after frying.

6.8.4.3 Semi-dehydrated soybean curd, other than food categories 6.8.4.1 and 6.8.4.2

Partially dehydrated soybean curd prepared other than by stewing in thick (e.g. miso) sauce or by deepfrying.Includes grilled products and mashed products that may be combined with other ingredients (e.g. to make a patty or a loaf).

6.8.5 Dehydrated soybean curd

Soybean curd from which all moisture has been removed through the process of freezing, aging, and dehydrating. It may be reconstituted with water or sauce for consumption, or is used directly in prepared dishes. It may also be deep-fried or simmered in sauce.

6.8.6 Fermented soybeans

The product is prepared from soybeans that have been steamed and fermented with certain fungi or bacteria (starter). The soft, whole beans have a distinctive aroma and taste. It includes products such as Kinema (Darjeeling hills and Sikkim), Turangbai (Meghalaya), Bekang (Mizoram), Peruyyan (Arunachal Pradesh), Hawaijar (Manipur), and Aakhuni (Nagaland) and other like Natto, and Tempe etc.

6.8.7 Fermented soybean curd

The product is prepared by forming soybean curd into a loaf during the fermentation process. It is a soft, flavoured product, either in red, rice-yellow, or grey-green.

6.8.8 Other soybean protein products

Other products from soybeans composed mainly of soybean protein such as extruded, textured, concentrated, and isolated soybean protein.

7.0 Bakery wares

Includes categories for bread and ordinary bakery wares (7.1) and for sweet, salty and savoury fine bakery wares (7.2).

7.1 Bread and ordinary bakery wares and mixes

Includes all types of non-sweet bakery products and bread-derived products.

7.1.1 Breads and rolls

Includes yeast-leavened and specialty breads like white or brown ormultigrain breadandIndian breads (like kulcha, chapatti, roti, parantha, nan, pav etc.), wheat rolls, milk rolls, challa bread, pizza-base or pizza-bread, soda bread etc.

7.1.1.1 Yeast-leavened breads and specialty breads

Includes all types of non-sweet bakery products and bread-derived products such as include white bread, rye bread, pumpernickel bread, raisin bread, whole wheat bread, pain courant francais, malt bread, hamburger rolls, whole wheat rolls, and milk rolls.

7.1.1.2 Soda breads

Includes all soda breads.

7.1.2 Crackers, excluding sweet crackers

The term “cracker” refers to a thin, crisp wafer, usually dough. Flavoured crackers (e.g. cheese flavoured) that are consumed as snacks are in 15.1 such as soda crackers, rye crispsetc.

7.1.3 Other ordinary bakery products

Includes all other ordinary bakery wares, such as cornbread and biscuits, bagels, pita and muffins. The term “biscuit” in this category refers to a small cake of shortened bread, leavened with baking powder or baking soda. It does not refer tithe British “biscuit,” which is a “cookie” or “sweet cracker” included in category 7.2.1.

7.1.4 Bread-type products, including bread stuffing and bread crumbs

Includes bread-based products such as croutons, bread stuffing and stuffing mixes, and prepared doughs (e.g. for biscuits, toasted bread (rusks), prepared doughs for bread/bread-type products including their frozen counterparts etc.). Bread mixes are included in category 7.1.6.

7.1.5 Steamed breads and buns

Oriental-style leavened wheat or rice products that are cooked in a steamer. Products may be made with or without fillingsuch as twisted rolls of various shapes, filled dumplings and steamed bun with meat, jam or other filling.

7.1.6 Mixes for bread and ordinary bakery wares

Includes all the mixes containing the dry ingredients to which wet ingredients (e.g. water, milk, oil, butter, and eggs) are added to prepare dough for baked goods from food categories 7.1.1 to 7.1.5 such as French bread mix, tin bread mix, panettone mix, ciabatta mix, among others. Mixes for fine bakerywares (e.g. cakes, cookies, pancakes) are found in category 7.2.3.

7.2 Fine bakery wares (sweet, salty, savoury) and mixes

Includes sub-categories for ready-to-eat products (7.2.1 and 7.2.2) as well as mixes (7.2.3) forpreparingfine baked goods.

7.2.1 Cakes, cookies and pies

The term “sweet cracker” or “sweet biscuit” used in this category refers to a cookie-like product that may beaten as a dessert such as butter cake, cheesecake, fruit-filled cereal bars, pound cake, moist cake (type of starchy dessert), western cakes, moon cakes, sponge cake, fruitfilledpies (e.g. apple pie), custard types, oatmeal cookies, sugar cookies and British “biscuits” (cookies or sweet crackers).

7.2.2 Other fine bakery products

Includes products that may be eaten as a dessert or as breakfast such as doughnuts, sweet rolls, muffins, pancakes, waffles, filled sweet buns, Danish pastry, wafers or cones for ice cream, flour confectionery, and trifles.

7.2.3 Mixes for fine bakery wares
Mixes containing the dry ingredients to which wet ingredients (e.g. water, milk, oil, butter, eggs) are added to preparea dough for fine baked goods such as cake mix, flour confectionery mix, pancake mix, pie-mix, and waffle mix. Prepared dough is found in category 7.1.4. Mixes for ordinary bakery wares (e.g. bread) is found in category 7.1.6.

8.0 Meat and meat products, including poultry
This category includes all types of meatandpoultry products, in pieces and cuts or comminutes fresh (8.1) and processed (8.2 and 8.3).

8.1 Fresh meat and poultry
Fresh products are usually free of additives.

8.1.1 Fresh meat andpoultry whole pieces or cuts
Untreated raw meat, and poultry carcasses and cuts.

8.1.2 Fresh meat and poultry comminuted
Untreated raw comminuted or mechanically deboned meat andpoultry.

8.2 Processed meat, and poultry products in whole pieces or cuts
Includes various treatments for non-heat treated meat cuts (8.2.1), and heat-treated meat cuts (8.3.2).

8.2.1 Non-heat treated processed meat and poultry products in whole pieces or cuts
This category describes several treatment methods (e.g. curing, salting, drying, pickling) that preserve and extend the shelf life of meats.

8.2.1.1 Cured (including salted) non-heat treated processed meat and poultry products in whole pieces or cuts
Salted products are treated with sodium chloride. Dry cured (dry pickled) products are prepared by rubbing salt directly on the meat surface. Wet pickle cured products are prepared by submerging the meat in a brine solution. Pump cured products are prepared by injecting brine into the meat. Curing may also be achieved by addition of additives. Smoked products are also included here.

8.2.1.2 Cured (including salted) and dried non-heat treated processed meat and poultry products in whole pieces or cuts
The meat cuts may be cured or salted as described for category 8.2.1.1, and then dried, or they may only be dried. Drying is achieved either in hot air or in vacuum.

8.2.1.3 Fermented non-heat treated processed meat and poultry products in whole pieces or cuts
Fermented products are a type of pickled product produced by the action of lactic acid bacteria in the presence of salt.

8.2.2 Heat-treated processed meat and poultry products in whole pieces or cuts

Includes cooked (including cured and cooked, and dried and cooked), heat-treated (including sterilized) and canned meat cuts.

8.2.3 Frozen processed meat andpoultry products in whole pieces or cuts

Includes raw and cooked meat cuts that have been frozen.

Amendment for substitution of highlighted provision

[77]**[8.2.3 Frozen raw, flavored/marinated, processed meat and poultry products in whole pieces or cuts –**

Includes raw, flavoured/marinated raw and cooked meat cuts that have been frozen.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

8.3 Processed comminuted meat andpoultry products

Includes various treatments for non-heat treated products (8.3.1) and heat-treated products (8.3.2).

8.3.1 Non-heat treated processed comminuted meat andpoultry products

This category describes several treatment methods (e.g. curing, salting, drying, pickling) that preserve and extend the shelf life of comminuted and mechanically deboned meat products.

8.3.1.1 Cured (including salted) non-heat treated processed comminuted meat and poultry products

Salted products are treated with sodium chloride. Dry cured (dry pickled) products are prepared by rubbing salt directly on the meat surface. Wet pickle cured products are prepared by submerging the meat in a brine solution. Pump cured products are prepared by injecting brine into the meat. Curing may also be achieved by addition of additives. Also includes smoked products.

8.3.1.2 Cured (including salted) and dried non-heat treated processed comminuted meat and poultry products

The comminuted or mechanically deboned products may be cured or salted as described for category 8.3.1.1, and then dried, or they may only be dried. Drying is achieved either in hot air or in vacuum.

8.3.1.3 Fermented non-heat treated processed comminuted meat and poultry products

Fermented products are a type of pickled product produced by the action of lactic acid bacteria in the presence of salt. Certain types of sausages may be fermented.

8.3.2 Heat-treated processed comminuted meat and poultry products

Includes cooked (including cured and cooked, and dried and cooked), heat-treated (including sterilized) and canned comminuted products.

8.3.3 Frozen processed comminuted meat andpoultry products

Includes raw, partially cooked and fully cooked comminuted or mechanically deboned meat products that have been frozen.

8.4 Edible casings (e.g. sausage casings)

Casings or tubing prepared from collagen, cellulose, or food-grade synthetic material or from natural sources that contain the sausage mix.

9.0 Fish and fish products, including molluscs, crustaceans, and echinoderms

This broad category is divided into categories for fresh fish (9.1) and various processed fish products (9.2– 9.4). This category includes aquatic vertebrates (e.g. fish) andaquatic invertebrates (e.g. jellyfish), as well as molluscs (e.g. clams, snails), crustaceans (e.g. shrimp, crab, lobster), and echinoderms (e.g. sea urchins, sea cucumbers). Fish products may be treated with coatings, such as glazes and spice rubs, prior to marketing to the consumer (e.g. glazed frozen fish fillets).

9.1 Fresh fish and fish products, including molluscs, crustaceans, and echinoderms

The term "fresh" refers to fish and fish products that are untreated except for refrigeration, storage on ice, or freezing upon catching at sea or in lakes or other bodies of water in order to prevent decomposition and spoilage.

9.1.1. Fresh fish

Includes fresh rohu, catla, hilsa, singhada, trout, pomphret, cod, salmon, fishroe etc

9.1.2 Fresh molluscs, crustaceans and echinoderms

Includes fresh shrimp, clams, crabs, lobster, snails etc.

9.2 Processed fish and fish products, including molluscs, crustaceans, and echinoderms

This category refers to fish products that are frozen and may require further cooking, as well as ready-to-eat cooked, smoked, dried, fermented, and salted products.

9.2.1 Frozen fish, fish fillets, and fish products, including molluscs, crustaceans, and echinoderms

Fresh, including partially cooked, fish subjected to freezing or quick-freezing at sea and on land for further processing such as frozen or deep frozen clams, cod fillets, crab, finfish, haddock, hake, lobster, minced fish, prawns and shrimp; frozen fish roe; frozen surimietc.

9.2.2 Frozen battered fish, fish fillets and fish products, including molluscs, crustaceans, and echinoderms

Uncooked product prepared from fish or fish portions, with dressing in eggs and bread crumbs or batter.Examples include frozen raw breaded or batter-coated shrimp; and frozen or quick-frozen breaded or battercoatedfish fillets, fish portions and fish sticks (fish fingers) etc.

9.2.3 Frozen minced and creamed fish products, including molluscs, crustaceans, and echinoderms

Uncooked product prepared from minced fish pieces in cream-type sauce.

9.2.4 Cooked and/or fried fish and fish products, including molluscs, crustaceans, and echinoderms
Includes all ready-to-eat cooked products as described in the sub-categories.

9.2.4.1 Cooked fish and fish products
Cooked products include steamed, boiled or any other cooking method except frying (see 9.2.4.3). The fish may be whole, in portions or comminuted such as fish sausage; cooked fish products boiled down in soy sauce; cooked surimi products, cooked fish roe; cooked fish and lobster paste (surimi-like products. Other fish paste (Oriental type) is found in 9.3.4.

9.2.4.2 Cooked molluscs, crustaceans, and echinoderms
Cooked products include steamed, boiled or any other cooking method except frying (see 9.2.4.3) such as cooked *Crangon crangon* and *Crangon vulgaris* (brown shrimp; cooked shrimp), clams and crabs.

9.2.4.3 Fried fish and fish products, including molluscs, crustaceans, and echinoderms
Ready-to-eat products prepared from fish or fish portions, with or without further dressing in eggs and breadcrumbs or batter, that are fried, baked, roasted or barbecued, and then packaged or canned with or without sauce or oil. Examples include ready-to-eat fried surimi, fried calamari, and fried soft-shell crabs.

9.2.5 Smoked, dried, fermented, and/or salted fish and fish products, including molluscs, crustaceans, and echinoderms
Smoked fish are usually prepared from fresh deep frozen or frozen fish that are dried directly or after boiling, with or without salting, by exposing the fish to freshly-generated sawdust smoke. Dried fish are prepared by exposing the fish to sunlight or drying directly or after boiling in a special installation; the fish may be salted prior to drying. Salted fish are either rubbed with salt or placed in a salt solution. This manufacturing process is different from that described in food category 9.3 for marinated and pickled fish. Cured fish is prepared by salting and then smoking fish such as salted anchovies, shrimp, and shad; smoked chub, cuttlefish and octopus; fish ham; dried and salted species of the *Gadidae* species; smoked or salted fish paste and fish roe; cured and smoked sablefish, shad, and salmon; dried shellfish, dried bonito, and boiled, dried fish.

9.3 Semi-preserved fish and fish products, including molluscs, crustaceans, and echinoderms
Includes products treated by methods such as marinating, pickling and partial cooking that have a limited shelf life.

9.3.1 Fish and fish products, including molluscs, crustaceans, and echinoderms, marinated and/or in jelly
Marinated products are manufactured by soaking the fish in vinegar or wine with or without added salt and spices. They are packaged in jars or cans and have a limited shelf life. Products in jelly may be manufactured by tenderizing fish products by cooking or steaming, adding vinegar or wine, salt and preservatives, and solidifying in a jelly such as "roll mops" (a type of marinated herring), sea eel(dogfish) in jelly and fish aspic.

9.3.2 Fish and fish products, including molluscs, crustaceans, and echinoderms, pickled and/or in brine

Pickled products are sometimes considered a type of marinated product. Pickling results from the treatment of the fish with a salt and vinegar or alcohol (e.g. wine) solution. Examples include different types of Oriental pickled productse.g. pickled fish, pickled herring and sprat.

9.3.3 Salmon substitutes, caviar, and other fish roe products

The term "caviar" refers only to the roe of the sturgeon species. Caviar substitutes are made of roe of various sea and freshwater fish (e.g. cod and herring) that are salted, spiced, dyed and may be treated with a preservative such as salted salmon roe, processed, salted salmon roe, cod roe, salted cod roe and lumpfish caviar. Occasionally, roe may be pasteurized. In this case, it is included in food category 9.4, since it is a fully preserved product. Roe products that are frozen, cooked or smoked are included in category 9.2.1, 9.2.4.1, and 9.2.5, respectively; fresh fish roe is found in category 9.1.1, 9.3.4. Semi-preserved fish and fish products, including molluscs, crustaceans, and echinoderms (e.g. fish paste), excluding products of food categories 9.3.1 – 9.3.3such as fish or crustacean pates and traditional Oriental fish paste. The latter is produced from fresh fish or the residue from fish sauce production, which is combined with other ingredients such as wheat flour, rice or soybeans. The product may be further fermented. Cooked fish or crustacean pastes (surimi-like products) are found in 9.2.4.1 and 9.2.4.2, respectively.

9.4 Fully preserved, including canned or fermented fish and fish products, including molluscs, crustaceans, and echinoderms

Products with extended shelf life, manufactured by pasteurizing or steam retorting and packaging in vacuumsealedair-tight containers to ensure sterility. Products may be packed in their own juice or in added oil or sauce. This category excludes fully cooked products (see category 9.2.4) such ascanned tuna, clams, crab, fish roe and sardines; gefilte fish balls; and surimi (heat-pasteurized).

10.0 Eggs and egg products

Includes fresh in-shell eggs (10.1), products that may substitute for fresh eggs (10.2) and other egg products (10.3 and 10.4).

10.1 Fresh eggs

Fresh in-shell eggs are free of additives.

10.2 Egg products

Products that may be used as replacement for fresh eggs in recipes or as a food (e.g. omelette). They are produced from fresh eggs by either (i) mixing and purifying the whole egg; or (ii) separating the egg white and yolk, and then mixing and purifying each separately. The purified whole egg, white or yolk is then further processed to produce liquid, frozen or dried eggs.

10.2.1 Liquid egg products

The purified whole egg, egg yolk or egg white is pasteurized and chemically preserved (e.g. by addition of salt).

10.2.2 Frozen egg products
Includes purified, pasteurized and frozen whole egg, egg yolk or egg white.

10.2.3 Dried and/or heat coagulated egg products
De-sugared purified, pasteurized and dried whole egg, egg yolk or egg white.

10.3 Preserved eggs, including alkaline, salted, and canned eggs
Includes traditional Oriental preserved products, such as salt-curedand alkaline treated eggs.

10.4 Egg-based desserts
Includes ready-to-eat products and products to be prepared from a dry mixsuch as flan and egg custard. Also includes custard fillings for fine bakery wares (e.g. pies).

11.0 Sweeteners, including honey
Includes all standardized sugars (11.1), non-standardized products (e.g. 11.2, 11.3, 11.4 and 11.6), and natural sweeteners (11.5 – honey).

11.1 Refined and raw sugars
Nutritive sweeteners, such as fully or partially purified sucrose (derived from sugar beet and sugar cane), glucose (derived from starch), or fructose, that are included in sub-categories 11.1.1 to 11.1.5.

11.1.1 White sugar, dextrose anhydrous, dextrose monohydrate, fructose
White sugar is purified and crystallized sucrose. Dextrose anhydrous is purified and crystallized D-glucose without water of crystallization. Dextrose monohydrate is purified and crystallized D-glucose with one molecule of water of crystallization. Fructose is purified and crystallized D-fructose. Examples include refined sugar, cube sugar, mishri etc.

11.1.2 Powdered sugar, powdered dextrose
Powdered sugar (icing sugar) is finely pulverized white sugar with or without added anti-cakingagents. Powdered dextrose (icing dextrose) is finely pulverized dextrose anhydrous or dextrose monohydrate, or a mixture of the two, with or without added anti-caking agents.

11.1.3 Soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar
Soft white sugar is fine grain purified, moist sugar, that is white in colour. Soft brown sugar is fine grain moist sugar that is light to dark brown in colour. Glucose syrup is a purified concentrated aqueous solution of nutritive saccharides derived from starch or inulin or both. Dried glucose syrup is glucose syrup from which water has been partially removed. Raw cane sugar is partially purified sucrose crystallized from partially purified cane juice without further purification. Examples include Khandsari sugar.

11.1.3.1 Dried glucose syrup used to manufacture sugar confectionery
Dried glucose syrup, as described in 11.1.3, used to manufacture candy products that are included in food category5.2 (e.g. hard or soft candies).

11.1.3.2 Glucose syrup used to manufacture sugar confectionery
Glucose syrup, as described in 11.1.3, used to manufacture candy products that are included in food category5.2 (e.g. hard or soft candies).

11.1.4 Lactose
A natural constituent of milk normally obtained from whey. It may be anhydrous, or contain one molecule of water of crystallization, or be a mixture of both forms.

11.1.5 Plantation or mill white sugar
Purified and crystallized sucrose.

[52][**11.1.6 Gur or Jaggery** means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm.

11.1.6.1 Cane Jaggery or Gur means the product obtained by boiling or processing juice pressed out of or extracted from sugarcane.

11.1.6.2 Palm Jaggery or Gur means the product obtained by boiling or processing juice pressed out of or extracted from palmyra palm or coconut palm.

11.1.6.3 Date Jaggery or Gur means the product obtained by boiling or processing juice pressed out of or extracted from date palm.]

11.2 Brown sugar excluding products of food category 11.1.3
Includes large-grain, brown or yellow lump sugars, such as demerara sugar, gur and jaggery.

11.3 Sugar solutions and syrups, also (partially) inverted, including treacle and molasses, excluding products of food category 11.1.3
Includes co-products of the sugar refining process (e.g. treacle and molasses), invert sugar (equimolarmixture of glucose and fructose produced from the hydrolysis of sucrose), and other sweeteners, such as high fructose corn syrup, high fructose inulin syrup and corn sugar.

11.4 Other sugars and syrups
Includes all types of table syrups (e.g.xylose, maple syrup), syrups for fine bakery wares and ices (e.g. caramel syrup, flavoured syrups), and decorative sugar toppings (e.g. coloured sugar crystals for cookies).

11.5 Honey:

Honey is the natural sweet substance produced by honeybees from the nectar of blossoms or secretions of plants. Examples of honey include wildflorahoney, multi-flora honey, rapeseed or mustard honey, clover honey etc.

11.6 Table-top sweeteners, including those containing high-intensity sweeteners

Includes products that are preparations of high-intensity sweeteners (e.g. acesulfame potassium, steviols) and/or ofpolyols (e.g. sorbitol).These products, which are sold to the final consumer, may be in powder, solid (e.g. tablets or cubes), or liquid form.

12.0 Salts, spices, soups, sauces, salads, protein products

This is a broad category that includes substances added to food to enhance its aroma and taste (12.1 – salt and salt substitutes; 12.2 – herbs, spices, seasonings and condiments (e.g. seasoning for instant noodles);12.3 – vinegars; and 12.4 - mustards), certain prepared foods (12.5 – soups and broths; 12.6 – sauces and like products; and 12.7 – salads (e.g. macaroni salad, potato salad) and sandwich spreads, excluding cocoaandnut-based spreads of food categories 4.2.2.5 and 5.1.3)), and products composed primarily of protein that are derived from soybeans or from other sources (e.g. milk, cereal, or vegetables) (12.9 –soybean basedseasonings and condiments; and 12.10 – protein products other than from soybeans).

12.1 Salt and salt substitutes

Includes salt (12.1.1) and salt substitutes (12.1.2) used as seasoning for food.

12.1.1 Salt

Primarily food-grade sodium chloride. Includes table salt, iodized and fluoride iodized salt, and dendritic salt. This category also includes similar traditional products like black salt, rock salt (sendhanamak, kala namak, Gumma namak) sea saltetc.

12.1.2 Salt substitutes

Salt substitutes are seasonings with reduced sodium content intended to be used on food in place of salt.

[52][12.2 Herbs, spices, seasonings, and condiments

This category describes items intended to enhance the aroma and taste of food. Spices means any form of spice including curry powders, spice oils, oleoresins and other mixtures where spice content is predominant.]

[52][12.2.1 Herbs, spices, masalas, spice mixtures including oleoresins or extracts/derivatives thereof]

Herbs and spices are usually derived from botanical sources, and may be dehydrated, and either ground or whole. Examples include chilli, turmeric, pepper, asafoetida, anise, aniseed (saunf), basil, bay leaf, caraway (shiajeera), cardamom (elaichi), large cardamom, cinnamon, clove, cumin, and carom seeds (ajowain) etc. Spices may also be found as blends in powder or paste form. Examples

of spice blends include chilli seasoning, chilli paste, curry paste, curry roux, and dry cures or rub that are applied to external surfaces of meat or fish. Blends of spices with other ingredients (Masalas) include curry powder, sambhar masala, rasam masala, chhole masala, pavbhaji masala etc.

12.2.2 Seasonings and condiments

Seasonings and condiments are spice mixes with other ingredients which go as toppings to sprinkle on rice and other foods, and include seasonings for noodles, Puliyogare mix, onion salt, garlic salt etc.The term "condiments" as used in the Food Category System does not include condiment sauces (e.g. ketchup, mayonnaise, mustard) or relishes.

12.3 Vinegars

Liquid produced from fermentation of ethanol from a suitable source (e.g. wine, cider). Examples include cider vinegar, wine vinegar, malt vinegar, spirit vinegar, grain vinegar, raisin vinegar, fruit (wine) vinegar and synthetic vinegar.

12.4 Mustards

Condiment sauce prepared from ground often defatted mustard seed that is mixed into slurry with water, vinegar, salt, oil and other spices and refined. Examples include Dijon mustard, and "hot" mustard (prepared from seeds with hulls).

12.5 Soups and broths

Includes ready-to-eat soups and mixes. The finished products may be water- (e.g. consommé) or milk-based (e.g. chowder).

12.5.1 Ready-to-eat soups and broths, including canned, bottled, and frozen

Water- or milk-based products consisting of vegetable, meat or fish broth with or without other ingredients (e.g. vegetables, meat, noodles) such as rasam, bouillon, broths, consommés, water- and cream-based soups, chowders, and bisques.

12.5.2 Mixes for soups and broths

Concentrated soup to be reconstituted with water and/or milk, with or without addition of other optional ingredients (e.g. vegetables, meat, noodles) such as rasam powder, bouillon powders and cubes; powdered and condensed soups; and stock cubes and powders etc.

12.6 Sauces and like products

Includes ready-to-eat sauces, gravies and dressings, and mixes to be reconstituted before consumption.The ready-to-eat products are divided into sub-categories for emulsified (12.6.1) and non-emulsified (12.6.2)products, whereas the sub-category for the mixes (12.6.3) encompasses both emulsified and non-emulsified sauce mixes.

12.6.1 Emulsified sauces and dips

Sauces, gravies, dressings based and dips, at least in part, on a fat- or oil-in water emulsionsuch as salad dressing (e.g. French, Italian, Greek, ranch style), fat-based sandwich spreads (e.g. mayonnaise with mustard), salad cream, and fatty sauces and snack dips (e.g. bacon and cheddar dip, onion dip).

12.6.2 Non-emulsified sauces

Include water-, coconut milk-, and milk-based sauces, gravies and dressings. Examples includebarbecue sauce, tomato ketchup, cheese sauce, Worcestershire sauce, Oriental thick Worcestershire sauce, chilli sauce, sweet and sour dipping sauce, and white (cream-based) sauce (sauce consisting primarily of milk or cream, with little added fat (e.g. butter) and flour, with or without seasoning or spices).

12.6.3 Mixes for sauces and gravies

Concentrated product, usually in powdered form, to be mixed with water, milk, oil or other liquid to prepare a finished sauce or gravy such as mixes for cheese sauce, and salad dressings etc.

12.6.4 Clear sauces

Includes thin, non-emulsified clear sauces that may be water-based. These sauces may be used as condiments or ingredients rather than as finished gravy such asoyster sauce and fish sauce.

12.7 Salads and sandwich spreads excluding cocoa- and nut-based spreads of food categories 4.2.2.5 and 5.1.3

Includes prepared salads (e.g. macaroni salad, potato salad), milk-based sandwich spreads, non-standardized mayonnaise-like sandwich spreads, and dressings etc.

12.8 Yeast and like products:

Includes baker's yeast and leaven used in the manufacture of baked goods. Includes the products used in the production of alcoholic beverages.

12.9 Soybean-based seasonings and condiments

Includes products that are derived from soybeans and other ingredients intended for use as seasonings andcondiments, such as fermented soybean paste and soybean sauces.

12.9.1 Fermented soybean paste

The product is made of soybeans, salt, water and other ingredients, using the process of fermentation (e.g. miso).

12.9.2 Soybean sauce

A liquid seasoning obtained by fermentation of soybeans, non-fermentation (e.g. hydrolysis) of soybeans, orby hydrolysis of vegetable protein.

12.9.2.1 Fermented soybean sauce

A clear, non-emulsified sauce made of soybeans, cereal, salt and water by the fermentation process.

12.9.2.2 Non-fermented soybean sauces

Non-fermented soybean sauce, which is also known as non-brewed soybean sauce, may be produced from vegetable proteins, such as defatted soybeans that are acid-hydrolyzed (e.g. with hydrochloric acid), neutralized (e.g. with sodium carbonate), and filtered.

12.9.2.3 Other soybean sauce
Non-emulsified sauce made from fermented soybean sauce and/or non-fermented soybean sauce, with or without sugar, with or without caramelization process.

12.10 Protein products other than from soybeans
Includes cereal or legume or vegetable protein productssuch as wheat gluten, vegetable protein analogues, and proteinaceous meat or milk and fish substitutes. Includes their isolates, concentrates and hydrolystes, single cell protein including Spirulina.

13.0 Foodstuffs intended for particular nutritional uses

13.1 Infant formulae, follow-up formulae, and formulae for special medical purposes for infants

13.1.1 Infant formulae

13.1.2 Follow-up formulae

13.2 Complementary foods for infants and young children

13.3 Dietetic foods intended for special medical purposes (excluding products of food category 13.1)

13.4 Dietetic formulae for slimming purposes and weight reduction

13.5 Dietetic foods (e.g., supplementary foods for dietary use) excluding products of food categories 13.1 -13.4 and 13.6

13.6 Food supplements

14.0 Beverages, excluding dairy products

14.1 Non-alcoholic ("soft") beverages
This broad category includes waters and carbonated waters (14.1.1), fruit and vegetable juices (14.1.2), fruit and vegetable nectars (14.1.3), water-based flavoured carbonated and non-carbonated drinks (14.1.4), and water-based brewed or steeped beverages such as coffee and tea (14.1.5).

14.1.1 Waters
Includes natural waters (14.1.1.1) and other bottled waters (14.1.1.2), each of which may be non-carbonated or carbonated.

14.1.1.1 Natural mineral waters and source waters

Waters obtained directly at the source and packaged close to the source; are characterized by the presence of certain mineral salts in relative proportions and trace elements or other constituents. Natural mineral water may be naturally carbonated (with carbon dioxide from the source), carbonated (with added carbon dioxide of another origin), decarbonised (with less carbon dioxide than present in the water at the source so it does not spontaneously give off carbon dioxide under conditions of standard temperature and pressure), or fortified (with carbon dioxide from the source), and non-carbonated (contains no free carbon dioxide).

14.1.1.2 Table waters and soda waters

Includes waters other than natural source waters that may be carbonated by addition of carbon dioxide and may be processed by filtration, disinfection, or other suitable means. These waters may contain added mineral salts. Carbonated and non-carbonated waters containing flavours are found in category 14.1.4such as table water, bottled water with or without added minerals, purified water, seltzer water, club soda, and sparkling water.

14.1.2 Fruit and vegetable juices

This category applies only to fruit and vegetable juices. Beverages based on fruit and vegetable juices are found in food category 14.1.4.2. Fruit-vegetable juice blends have separate classifications for each component (i.e. fruit juice (14.1.2.1) and vegetable juice (14.1.2.3).

14.1.2.1 Fruit juices

Fruit juice is the unfermented but fermentable liquid obtained from the edible part of sound, appropriately mature and fresh fruit or of fruit maintained in sound condition by suitable means. The juice is prepared by suitable processes, which maintain the essential physical, chemical, organoleptical and nutritional characteristics of the juices of the fruit from which it comes. The juice may be cloudy or clear, and may have restored (to the normal level attained in the same kind of fruit) aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must have been recovered from the same kind of fruit. Pulp and cells obtained by suitable physical means from the same kind of fruit may be added. A single juice is obtained from one kind of fruit. A mixed juice is obtained by blending two or more juices or juices and purees, from different kinds of fruit. Fruit juice may be obtained, e.g. by directly expressing the juice by mechanical extraction processes, by reconstituting concentrated fruit juice(food category 14.1.2.3) with water, or in limited situations by water extraction of the whole fruit.. Examples include orange juice, apple juice, black currant juice, lemon juice, orange-mango juice and coconut water.

14.1.2.2 Vegetable juices

Vegetable juice is the liquid unfermented but fermentable product intended for direct consumption obtained by mechanical expression, crushing, grinding, and/or sieving of one or more sound fresh vegetables or vegetables preserved exclusively by physical means. The juice may be clear, turbid, or pulpy. It may have been concentrated and reconstituted with water. Products may be based on a single vegetable (e.g. carrot)or blends of vegetables (e.g. carrots, celery).

14.1.2.3 Concentrates of fruit juices

Concentrated fruit juice is the product that complies with the definition given in food category 14.1.2.1. It is prepared by the physical removal of water from fruit juice in an amount to increase the Brix level to a value at least 50% greater than that established for reconstituted juice from the same fruit. In the production of juice that is to be concentrated, suitable processes are used, and may be combined; with simultaneous diffusion of the pulp cells or fruit pulp by water, provided that the water-extracted soluble fruit solids are added in-line to the primary juice, before the concentration procedure. Fruit juice concentrates may have restored (to the normal level attained in the same kind of fruit) aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must be recovered from the same kind of fruit. Pulp and cells obtained by suitable physical means from the same kind of fruit may be added. Sold in liquid, syrup and frozen forms for the preparation of a ready-to-drink juice by addition of water. Examples include frozen orange juice concentrate, and lemon juice concentrate.

14.1.2.4 Concentrates of vegetable juices

Prepared by the physical removal of water from vegetable juice.Sold in liquid, syrup and frozen forms for the preparation of a ready-to-drink juice by addition of water. Includes carrot juice concentrate.

14.1.3 Fruit and vegetable nectars

Fruit and vegetable nectars are beverages produced from purees, juices, or concentrates of either, blended with water and sugar, honey, syrups, and/or sweeteners. Fruit-vegetable nectar blends are reported under their components (i.e. fruit nectar (14.1.3.1) and vegetable nectar (14.1.3.2).

14.1.3.1 Fruit nectar

Fruit nectar is the unfermented but fermentable product obtained by adding water with or without the addition of sugar, honey, syrups, and/or sweeteners to fruit juice, concentrated fruit juice, fruit purees or concentrated fruit purees, or a mixture of those products. Aromatic substances, volatile flavour components, pulp and cells, all of which must have been recovered from the same kind of fruit and obtained by suitable physical means, may be added. Products may be based on a single fruit or on fruit blends such aspear nectar and peach nectar.

14.1.3.2 Vegetable nectar

Product obtained by adding water with or without the addition of sugar, honey, syrups, and/or sweeteners to vegetable juice or concentrated vegetable juice, or a mixture of those products. Products may be based on a single vegetable or on a blend of vegetables.

14.1.3.3 Concentrates of fruit nectar

Prepared by the physical removal of water from fruit nectar or its starting materials. Sold in liquid, syrup and frozen forms for the preparation of a ready-to-drink nectar by addition of water. Examples: pear nectar concentrate and peach nectar concentrate.

14.1.3.4 Concentrates of vegetable nectar

Prepared by the physical removal of water from vegetable nectar.Sold in liquid, syrup and frozen forms forth preparation of ready-to-drink nectars by addition of water.

14.1.4 Water-based flavoured drinks, including "sport," "energy," or "electrolyte" drinks and particulateddrinks

Includes all carbonated and non-carbonated varieties and concentrates, products based on fruit and vegetable juices, coffee-, tea- and herbal-based drinks etc.

14.1.4.1 Carbonated water-based flavoured drinks

Includes water-based flavoured drinks with added carbon dioxide with nutritive, non-nutritive and/or intense sweeteners and other permitted food additives. Includes *gaseosa* (water-based drinks with added carbon dioxide, sweetener, and flavour), and sodas such as colas, pepper-types, root beer, lemon-lime, and citrus types, both diet/light and regular types. These beverages may be clear, cloudy, or may contain particulate matter (e.g. fruit pieces). Includes so-called "energy" drinks that are carbonated and contain high levels of nutrients and other ingredients.

14.1.4.2 Non-carbonated water-based flavoured drinks, including punches and Ades

Include water-based flavoured drinks without added carbon dioxide, fruit and vegetable juice-based drinks(e.g. almond, aniseed, coconut-based drinks, and ginseng drink), fruit flavoured ades (e.g. lemonade, orangeade), fruit based soft drinks, capile groselha, lactic acid beverage, ready-to-drink coffee and tea drinks with or without milk or milk solids, and herbal-based drinks (e.g. iced tea, fruit-flavoured iced tea, chilled canned cappuccino drinks) and "sports" drinks containing electrolytes. These beverages may be clear or contain particulated matter (e.g. fruit pieces), and may be unsweetened or sweetened with sugar ora non-nutritive high-intensity sweetener. Includes so-called "energy" drinks that are non-carbonated and contain high levels of nutrients and other ingredients.

14.1.4.3 Concentrates (liquid or solid) for water-based flavoured drinks

Include powder, syrup, liquid and frozen concentrates for the preparation of carbonated or non-carbonated water-based non-alcoholic beverages by addition of water or carbonated water. Examples include squashes, fountain syrups (e.g. cola syrup), fruit syrups for soft drinks, frozen or powdered concentrate for lemonade and iced tea mixes.

14.1.5 Coffee, coffee substitutes, tea, herbal infusions, and other hot cereal and grain beverages, excluding cocoa

Includes the ready-to-drink products (e.g. canned), and their mixes and concentrates such as chicory-based hot beverages (postum), rice tea, mate tea, and mixes for hot coffee and tea beverages (e.g. instant coffee, powder for hot cappuccino beverages). Treated coffee beans for the manufacture of coffee products are also included. Ready-to-drink cocoa is included in category 1.1.2, and cocoa mixes in 5.1.1.

14.2 Alcoholic beverages, including alcohol-free and low-alcoholic counterparts

The alcohol-free and low-alcoholic counterparts are included in the same category as the alcoholic beverage.

14.2.1 Beer and malt beverages
Alcoholic beverages brewed from germinated barley (malt), hops, yeast, and water such as ale, lager, pilsner, brown beer, weiss beer, oud bruin beer, Obergariges Einfachbier, light beer, table beer, malt liquor, porter, stout, and barley wine.

14.2.2 Cider and Perry
Fruit wines made from apples (cider) and pears (Perry). Also includes cider bouche.

14.2.3 Grape wines
Alcoholic beverage obtained exclusively from the partial or complete alcoholic fermentation of fresh grapes, whether crushed or not, or of grape must (juice).

14.2.3.1 Still grape wine
Grape wine (white, red, rosé, or blush, dry or sweet) that may contain up to a maximum 0.4g/100 ml (4000mg/kg) carbon dioxide at 20^{o}C.

14.2.3.2 Sparkling and semi-sparkling grape wines
Grape wines in which carbonation is produced during the fermentation process, either by bottle fermentation or closed tank fermentation. Also includes carbonated wine whose carbon dioxide is partially or totally of exogenous origin such as spumante, and "cold duck" wine.

14.2.3.3 Fortified grape wine, grape liquor wine, and sweet grape wine
Grape wines produced either by: (i) the fermentation of grape must (juice) of high sugar concentration; or (ii) by the blending of concentrated grape juice with wine; or (iii) the mixture of fermented must with alcohol such as grape dessert wine.

14.2.4 Wines (other than grape)
Includes wines made from fruit other than grapes, apples and pears, and from other agricultural products, including grain (e.g. rice). These wines may be still or sparkling. Examples include rice wine (*sake*),and sparkling and still fruit wines.

14.2.5 Mead
Alcoholic liquor made from fermented honey, malt and spices, or just of honey. Includes honey wine.

14.2.6 Distilled spirituous beverages containing more than 15% alcohol
Includes all distilled spirituous beverages derived from grain (e.g. corn, barley, rye, wheat), tubers (e.g. potato), fruit (e.g. grapes, berries) or sugar cane that contain greater than 15% alcohol such as aperitifs, brandy (distilled wine), cordials, liqueurs (including emulsified liqueurs), tequila**,** whiskey, and vodka.

14.2.7 Aromatized alcoholic beverages
Includes all non-standardized alcoholic beverage products. Although most of these products contain less than 15% alcohol, some traditional non-standardized aromatized products may contain up to 24% alcoholsuch as aromatized wine, cider and perry; aperitif wines; and prepared cocktails

(mixtures of liquors, liqueurs, wines, essences, fruit and plant extracts, etc. marketed as ready-to-drink products or mixes). Cooler-type beverages are composed of beer, malt beverage, wine or spirituous beverage, low-alcoholic refreshers, fruit juice(s), and soda water (if carbonated) etc.

15.0 Ready-to-Eat savouries

Includes all types of savoury snack foods.

15.1 Snacks - potato, cereal, flour or starch based (from roots and tubers, pulses and legumes)

Includes all savoury snacks, with or without added flavourings, [52][but excludes unsweetened crackers (category 7.1.2). Example includes potato chips], popcorn, pretzels, rice crackers, flavoured crackers (e.g. cheese-flavoured crackers), bhujia (namkeen; snack made of a mixture of flours, maize, potatoes, salt, dried fruit, peanuts, spices, colours, flavours, and antioxidants*)*, and papads(prepared from soaked rice flour or from black gram or cow pea flour, mixed with salt and spices, and formed into balls or flat cakes), khari, kara, murukku, namakpara, chiwda, palakayalu, ribbon or thattupakoda, dalmoth or mixtures, soya nuts, nimki, fali (e.g. cholafali), other fried or baked snacks or savouries, uppuseedai, appam, bhel-mix, sev, gathiya, shankarpali, farsan, kurmura, murmura, papadi, crisps, chakli, etc. Also includes sweet snacks e.g. chikki, gajak, murrunda, gudchana, sugar coated dals and other sweet dal snacks (dals coated with jaggery, sugar, honey and other ingredients).

15.2 Processed nuts, including coated nuts and nut mixtures

Includes all types of whole nuts processed by, e.g. dry-roasting, roasting, marinating or boiling, either in-shellor shelled, salted or unsalted. Yoghurt-, cereal-, and honey-covered nuts, and dried fruit-nut-and-cereal snacks are classified here. [52][Chocolate-covered nuts are classified in 5.1.3, and nuts covered in imitation chocolate are included in 5.1.4.]

15.3 Snacks - fish based

This describes savoury crackers with fish, fish products or fish flavouring. Dried fish per sethat may be consumed as a snack is assigned to food category 9.2.5, and dried meat snacks are assigned to food category 8.3.1.2.

16.0 Prepared foods

These foods are not included in the other food categories (1-15) and shall be considered on a case-bycasebasis. Prepared foods are mixtures of multiple components (e.g. meat, sauce, grain, cheese, vegetables); the components are included in other food categories. Prepared foods require minimal preparation by the consumer (e.g. heating, thawing, rehydrating).e.g. pav- bhaji, ready-to-eat dishes, biryani,curried rice, sandwiches (filling with egg /chicken/vegetarian sandwiches etc.), burgers, fish burgers, pizza etc. Provisions for additives will be listed in this food category in these regulations

only if the additive is needed: (i) solely to have a technological function in the prepared food as sold to the consumer; or (ii) at a use level that has an intentional technological function in the prepared food that exceeds the use level that can be accounted for by carry-over from the individual components

III FUNCTIONAL CLASSES, DEFINITIONS AND TECHNOLOGICAL PURPOSES

Reno.	Functional Classes	Definition	Technological purpose
1	Acidity regulator	A food additive, which controls the acidity or alkalinity of a food.	Adjusting pH, acidity, alkalinity, and buffering activity.
2	Anti caking agent	A food additive, which reduces the tendency of components of food to adhere to one another.	Anticaking, anti-sticking, drying and dusting.
3	Antifoaming agent	A food additive, which prevents or reduces foaming.	Antifoaming and de-foaming.
4	Antioxidant	A food additive, which prolongs the shelf-life of foods by protecting against deterioration caused by oxidation.	Antioxidant, antioxidant synergist, and antibrowning.
5	Bleaching agent	A food additive (non-flour use) used to decolorize food. Bleaching agents do not include pigments.	Decolorising, and bleaching.
6	Bulking agent	A food additive, which contributes to the bulk of a food without contributing significantly to its available energy value.	Bulkingand filling.
7	Carbonating agent	A food additive used to provide carbonation in a food.	Providing carbon dioxide gas.
8	Carrier	A food additive used to dissolve, dilute, disperse or otherwise physically	Carrier, diluent and encapsulation.

Reno.	Functional Classes	Definition	Technological purpose
		modify a food additive or nutrient without altering its function (and without exerting any technological effect itself) in order to facilitate its handling, application or use of the food additive or nutrient.	
9	Colour	A food additive, which adds or restores colour in a food.	Colour, decorative pigment, surface colourant for eye appeal
10	Colour retention agent	A food additive, which stabilizes, retains or intensifies the colour of a food	Colour fixation/retention/ stabilization
11	Emulsifier	A food additive, which forms or maintains a uniform emulsion of two or more phases in a food.	Emulsification,plasticization,dispe rsion, surface action,inhibition of crystallization, density adjustment (flavouring oils in beverages), suspensionand clouding.
12	Emulsifying salt	A food additive, which, in the manufacture of processed food, rearranges proteins in order to prevent fat separation.	Prevention of fat separation, improving dispersion and blending/melding.
13	Firming agent	A food additive, which makes or keeps tissues of fruit or vegetables firm and crisp, or interacts with gelling agents to produce or strengthen a gel.	Texture retention and strengthening.
14	Flavour enhancer	A food additive, which enhances the existing taste and/or odour of a food.	Enhancement or potentiation of flavours.
15	Flour reatment agent	A food additive, which is added to flour or dough to improve its baking quality or colour.	Flour bleaching, improving, dough conditioning, and strengthening.

Reno.	Functional Classes	Definition	Technological purpose
16	Foaming agent	A food additive, which makes it possible to form or maintain a uniform dispersion of a gaseous phase in a liquid or solid food.	Increased foaming, and aeration,
17	Gelling agent	A food additive, which gives a food texture through formation of a gel.	Gel formation
18	Glazing agent	A food additive, which when applied to the external surface of a food, imparts a shiny appearance or provides a protective coating.	Glazing, sealing, coating, surface-finishing, polishing, andfilm-forming.
19	Humectant	A food additive, which prevents food from drying out by counteracting the effect of a dry atmosphere.	Moisture retentionand wetting.
20	Packaging gas	A food additive gas, which is introduced into a container before, during or after filling with food with the intention to protect the food, for example, from oxidation or spoilage.	Providing inert gaseous atmosphere in packages.
21	Preservative	A food additive, which prolongs the shelf-life of a food by protecting against deterioration caused by microorganisms.	Shelf life extension through antimicrobial action.
22	Propellant	A food additive gas, which expels a food from a container	Expulsion of food from a container
23	Raising agent	A food additive or a combination of food additives, which liberate(s)	Providing volume and body/texture.

Reno.	Functional Classes	Definition	Technological purpose
		gas and thereby increase(s) the volume of a dough or batter.	
24	Sequestrant	A food additive, which controls the availability of a cation.	Chelation of ions.
25	Stabilizer	A food additive, which makes it possible to maintain a uniform dispersion of two or more components.	Stabilizing of foams/ colloids/ emulsions.
26	Sweetener	A food additive (other than a mono- or disaccharide sugar), which imparts a sweet taste to a food.	Reduction of energy as a substitute to mono or disaccharide sugars
27	Thickener	A food additive, which increases the viscosity of a food.	Providing body and texture and binding

IV.USE OF FOOD ADDITIVES IN FOOD PRODUCTS

Food products may contain additives as specified in these regulations and in the following Tables. (All capital and bold additives in the Tables 1 to 15 refer to the Group of Additives listed with their INS Numbers in Annex-1)

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
1.0	**Dairy products and analogues, excluding products of food category 2.0**				
1.1	**Milk and dairy-based drinks**				

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
1.1.1	**Milk and buttermilk (plain)**	No additives permitted			
1.1.1.1	**Milk (plain)**	**PHOSPHATES**		1,500 mg/kg	33, 227
1.1.1.2	**Buttermilk (plain)**	**PHOSPHATES**		1,500 mg/kg	33
1.1.2	**Dairy-based drinks - flavoured milk and/or fermented**	Acesulfame potassium	950	350 mg/kg	188
		[75][Alitame	956	100 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Allura red AC	129	100 mg/kg	52
		Aspartame	951	600 mg/kg	191
		Aspartame-Acesulfame salt	962	350 mg/kg	113
		Brilliant blue FCF	133	100 mg/kg	52
		CAROTENOIDS		150 mg/kg	52
		Curcumin	100	100 mg/kg	
		Canthaxanthin	161g	15 mg/kg	52, 170
		Caramel color (plain)	150a	GMP	
		Caramel III - ammonia caramel	150c	2,000 mg/kg	52
		Caramel IV - sulfite ammonia caramel	150d	2,000 mg/kg	52
		Annatto	160b(i), (ii)	100 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	52
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		50 mg/kg	190, 52

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		Fast green FCF	143	100 mg/kg	52
		Grape skin extract	163(ii)	150 mg/kg	181, 52
		IRON OXIDES		20 mg/kg	52
		Indigotine (Indigo carmine)	132	100 mg/kg	52
		Neotame	961	20 mg/kg	
		PHOSPHATES		1,320 mg/kg	33
		POLYSORBATES		3,000 mg/kg	
		Ponceau 4R	124	100 mg/kg	52
		Carmoisine	122	100 mg/kg	
		Erythrosine	127	50 mg/kg	
		Tartrazine	102	100 mg/kg	
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	52
		SACCHARINS		80 mg/kg	
		SORBATES		1,000 mg/kg	220, 42
		Steviol glycosides	960	200 mg/kg	26, 201
		Sucralose (Trichlorogalactosucrose)	955	300 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	52
		Sodium aluminosilicate	554	60 mg/kg	6, 253
		Hydroxy propyl methyl cellulose	464	7.5 g/kg	For flavoured milk only

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
1.2	**Fermented and renneted milk products (plain), excluding food category 01.1.2 (dairy-based drinks), fermented milk products,yoghurt, flavoured yoghurt, dahi, flavoured dahi,mishti dahi**	**PHOSPHATES**		1,000 mg/kg	33
1.2.1	**Fermented milks (plain)***	Caramel IV - sulfite ammonia caramel	150d	150 mg/kg	12
		*No additives permitted in Dahi or Curd			
1.2.1.1	**Fermented milks (plain) not heat treated after fermentation**	No additives permitted			
1.2.1.2	**Fermented milks (plain) heat treated after fermentation**	Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		Acetic and fatty acid esters of glycerol	472a	GMP	234
		Acid treated starch	1401	GMP	234
		Alkaline treated starch	1402	GMP	234
		Bleached starch	1403	GMP	234
		Gellan gum	418	GMP	234
		Glucono delta-lactone	575	GMP	
		Guar gum	412	GMP	234

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Gum arabic (Acacia gum)	414	GMP	234
		Hydroxypropyl cellulose	463	GMP	234
		Hydroxypropyl methyl cellulose	464	GMP	234
		Hydroxypropyl starch	1440	GMP	234
		Karaya gum	416	GMP	234
		Konjac flour	425	GMP	234
		Lactic and fatty acid esters of glycerol	472b	GMP	234
		Magnesium carbonate	504(i)	GMP	
		Magnesium chloride	511	GMP	234
		Magnesium hydroxide	528	GMP	
		Magnesium hydroxide carbonate	504(ii)	GMP	
		Malic acid, DL-	296	GMP	
		Methyl cellulose	461	GMP	234
		Methyl ethyl cellulose	465	GMP	234
		Microcrystalline cellulose (Cellulose gel)	460(i)	GMP	234
		Mono and di glycerides of fatty acids	471	GMP	234
		Nitrogen	941	GMP	59
		Nitrous oxide	942	GMP	59
		Pectins	440	GMP	234
		Alginic acid	400	GMP	234
		Ammonium alginate	403	GMP	234
		Ammonium hydroxide	527	GMP	
		Calcium alginate	404	GMP	234

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Calcium carbonate	170(i)	GMP	
		Calcium hydroxide	526	GMP	
		Calcium lactate	327	GMP	
		Calcium oxide	529	GMP	
		Carbon dioxide	290	GMP	59
		Carob bean gum	410	GMP	234
		Citric acid	330	GMP	
		Citric and fatty acid esters of glycerol	472c	GMP	234
		Potassium alginate	402	GMP	234
		Potassium carbonate	501(i)	GMP	234
		Potassium dihydrogen citrate	332(i)	GMP	234
		Potassium lactate	326	GMP	
		Powdered cellulose	460(ii)	GMP	
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	234
		Salts of oleic acid with calcium, potassium and sodium	470(ii)	GMP	234
		Sodium alginate	401	GMP	234
		Sodium carbonate	500(i)	GMP	
		Carboxymethyl cellulose	466	GMP	234
		Sodium dihydrogen citrate	331(i)	GMP	234
		Sodium hydrogen carbonate	500(ii)	GMP	
		Sodium hydroxide	524	GMP	
		Sodium lactate	325	GMP	
		Tara gum	417	GMP	234
		Tragacanth gum	413	GMP	234
		Tripotassium citrate	332(ii)	GMP	234

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Xanthan gum	415	GMP	234
		Curcumin	100	100 mg/kg	
		RIBOFLAVINS		GMP	
		Caramel colour (Plain) Caramel I	150a	150 mg/kg	
		Annatto	160b(i), (ii)	100 mg/kg	
		CAROTENOIDS		100 mg/kg	INS 160f only in flavoured and fruit yoghurt
		Canthaxanthin	161g	100 mg/kg	
		Tartrazine	102	100 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		Carmoisine	122	100 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		Erythrosine	127	50 mg/kg	
		Indigotine (Indigocarmine)	132	100 mg/kg	3
		Brilliant blue FCF	133	100 mg/kg	
		Fast green FCF	143	100 mg/kg	
1.2.2	**Renneted milk (plain)**	Caramel IV - sulfite ammonia caramel	150d	GMP	
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		SORBATES		1,000 mg/kg	42
		Calcium carbonate	170(i)	GMP	
		Carbon dioxide	290	GMP	59
		Lecithins	322(i),(ii)	GMP	
		Carob bean gum	410	GMP	
		Guar gum	412	GMP	
		Gum arabic (Acacia gum)	414	GMP	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Mannitol	421	GMP	
		Glycerol	422	GMP	
		Microcrystalline cellulose (Cellulose gel)	460(i)	GMP	
		Methyl cellulose	461	GMP	
		Hydroxypropyl cellulose	463	GMP	
		Hydroxypropyl methyl cellulose	464	GMP	
		Methyl ethyl cellulose	465	GMP	
		Acetic and fatty acid esters of glycerol	472a	GMP	
		Lactic and fatty acid esters of glycerol	472b	GMP	
		Citric and fatty acid esters of glycerol	472c	GMP	
		Magnesium chloride	511	GMP	
		Nitrogen	941	GMP	
		Dextrins, roasted starch	1400	GMP	
		Acid-treated starch	1401	GMP	
		Alkaline treated starch	1402	GMP	
		Bleached starch	1403	GMP	
		Oxidized starch	1404	GMP	
		Monostarch phosphate	1410	GMP	
		Distarch phosphate	1412	GMP	
		Acetylated distarch phosphate	1414	GMP	
		Acetylated distarch adipate	1422	GMP	
		Hydroxypropyl starch	1440	GMP	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Hydroxypropyl distarch phosphate	1442	GMP	
		Pectins	440	GMP	
		Phosphated distarch phosphate	1413	GMP	
		Potassium dihydrogen citrate	332(i)	GMP	
		Powdered cellulose	460(ii)	GMP	
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	
		Salts of oleic acid with calcium, potassium and sodium	470(ii)	GMP	
		Carboxymethyl cellulose	466	GMP	
		Sodium dihydrogen citrate	331(i)	GMP	
		Starch acetate	1420	GMP	
		Starch sodium octenyl succinate	1450	GMP	
		Starches, enzyme treated	1405	GMP	
		Tara gum	417	GMP	
		Tragacanth gum	413	GMP	
		Tripotassium citrate	332(ii)	GMP	
		Trisodium citrate	331(iii)	GMP	
1.3	**Condensed /evaporated milk and analogues (plain)**				
1.3.1		Calcium carbonate	170(i)		

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
	Condensed milk (plain), evaporated milk(s), sweetened condensed milk(s)	Sodium citrates	331	2,000 mg/kg singly or 3,000 mg/kg in combination	Total salt content shall not exceed 3,000 mg/kg calculated as phosphorus/carbonates /citrate/ chloride
		Potassium citrates	332		
		Calcium citrates	333		
		PHOSPHATES			
		Sodium carbonate	500(i)		
		Potassium carbonate	501(i)		
		Potassium chloride	508		
		Calcium chloride	509		
		Glucono delta lactone	575	GMP	Permitted in khoya only
		Propionic acid; sodium and calcium propionate expressed as propionic acid (singly or in combination)	280, 281, 282	2,000 mg/kg	Permitted in khoya only
		SORBATES		2,000 mg/kg	Permitted in khoya only
		Nisin	234	12.5 mg/kg	Permitted in khoya only
		Carrageenan	407	150 mg/kg	
1.3.2	**Beverage whitener**				
1.3.2.1	**Non dairy based beverage whitener**	**ASCORBYL ESTERS**		80 mg/kg	10
		Acesulfame potassium	950	2,000 mg/kg	188
		Aspartame	951	6,000 mg/kg	191
		CAROTENOIDS		100 mg/kg	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Caramel III - ammonia caramel	150c	1,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	1,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyl tartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		Neotame	961	65 mg/kg	
		PHOSPHATES		13,000 mg/kg	33
		POLYSORBATES		4,000 mg/kg	
		Propylene glycol esters of fatty acids	477	1,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SORBATES		200 mg/kg	42
		Sodium alumino silicate	554	570 mg/kg	260, 6
		Sucralose (Trichlorogalactosucrose)	955	580 mg/kg	
		Sucroglycerides	474	20,000 mg/kg	
		Tertiary butylhydroquinone (TBHQ)	319	100 mg/kg	15, 195
1.4	**Cream (plain) and the like cream and malai**				
1.4.1	**Pasteurized cream (plain), cream and malai**	No additives permitted			
1.4.2	**Sterilized and UHT creams, whipping and whipped**	**PHOSPHATES**		2,200 mg/kg	33
		POLYSORBATES		1,000 mg/kg	
		Acetic and fatty acid esters of glycerol	472a	GMP	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
	creams, and reduced fat creams (plain)	Acetylated distarch adipate	1422	GMP	
		Acetylated distarch phosphate	1414	GMP	
		Acid-treated starch	1401	GMP	236
		Agar	406	GMP	
		Alginic acid	400	GMP	
		Ammonium alginate	403	GMP	
		Bleached starch	1403	GMP	236
		Calcium alginate	404	GMP	
		Calcium carbonate	170(i)	GMP	
		Calcium chloride	509	GMP	
		Calcium lactate	327	GMP	
		Calcium sulfate	516	GMP	
		Carbon dioxide	290	GMP	278, 59
		Carob bean gum	410	GMP	
		Carrageenan	407	GMP	
		Citric acid	330	GMP	
		Citric and fatty acid esters of glycerol	472c	GMP	
		Dextrins, roasted starch	1400	GMP	236
		Diacetyltarteric and fatty acid esters of glycerol	472e	6,000 mg/kg	
		Distarch phosphate	1412	GMP	
		Gellan gum	418	GMP	
		Guar gum	412	GMP	
		Gum arabic (Acacia gum)	414	GMP	
		Hydroxypropyl cellulose	463	GMP	
		Hydroxypropyl distarch phosphate	1442	GMP	
		Hydroxypropyl methyl cellulose	464	GMP	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Hydroxypropyl starch	1440	GMP	
		Konjac flour	425	GMP	236
		Lactic acid, L-, D- and DL-	270	GMP	
		Lactic and fatty acid esters of glycerol	472b	GMP	
		Lecithins	322(i), (ii)	GMP	
		Methyl cellulose	461	GMP	
		Methyl ethyl cellulose	465	GMP	
		Microcrystalline cellulose (Cellulose gel)	460(i)	GMP	
		Mono- and di-glycerides of fatty acids	471	GMP	
		Monostarch phosphate	1410	GMP	
		Nitrogen	941	GMP	278, 59
		Nitrous oxide	942	GMP	278, 59
		Oxidized starch	1404	GMP	236
		Pectins	440	GMP	
		Phosphated distarch phosphate	1413	GMP	
		Polydextroses	1200	GMP	236
		Potassium alginate	402	GMP	
		Potassium carbonate	501(i)	GMP	
		Potassium chloride	508	GMP	
		Potassium dihydrogen citrate	332(i)	GMP	
		Potassium hydrogen carbonate	501(ii)	GMP	
		Potassium lactate	326	GMP	
		Powdered cellulose	460(ii)	GMP	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Processed eucheuma seaweed	407a	GMP	
		Sodium alginate	401	GMP	
		Sodium carbonate	500(i)	GMP	
		Carboxymethyl cellulose	466	GMP	
		Sodium dihydrogen citrate	331(i)	GMP	
		Sodium hydrogen carbonate	500(ii)	GMP	
		Sodium lactate	325	GMP	
		Sodium sesquicarbonate	500(iii)	GMP	
		Starch acetate	1420	GMP	
		Starch sodium octenyl succinate	1450	GMP	
		Tara gum	417	GMP	236
		Tragacanth gum	413	GMP	236
		Tricalcium citrate	333(iii)	GMP	
		Tripotassium citrate	332(ii)	GMP	
		Trisodium citrate	331(iii)	GMP	
		Xanthan gum	415	GMP	
1.4.3	**Clotted cream (plain)**	Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		Nisin	234	10 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		POLYSORBATES		1,000 mg/kg	
1.4.4	**Cream analogues**	Acesulfame potassium	950	1,000 mg/kg	188
		Aspartame	951	1,000 mg/kg	191
		CAROTENOIDS		20 mg/kg	
		Caramel III - ammonia caramel	150c	5,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	5,000 mg/kg	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		beta-Carotenes, vegetable	160a(ii)	20 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	6,000 mg/kg	
		Grape skin extract	163(ii)	150 mg/kg	181, 201
		Neotame	961	33 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		POLYSORBATES		5,000 mg/kg	
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	86
		Sucralose (Trichlorogalactosucrose)	955	580 mg/kg	
1.5	**Milk powder and cream powder and powder analogues (plain)**				
1.5.1	**Milk powder and cream powder (plain)**	**ASCORBYL ESTERS**		500mg/kg	10
		Butylated hydroxyanisole (BHA)	320	100mg/kg	15, 196
		Butylated hydroxytoluene (BHT)	321	200mg/kg	15, 196
		Calcium aluminium silicate	556	265 mg/kg	6, 259
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/Kg	
		PHOSPHATES		3,000 mg/kg	33
		Polydimethylsiloxane	900a	10 mg/kg	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Propyl gallate	310	200 mg/kg	
		Sodium alumino silicate	554	265 mg/kg	
		Sucroglycerides	474	10,000 mg/kg	
1.5.1.1	**Dairy baseddairy whitener**				
1.5.2	**Powder analogues**	**ASCORBYL ESTERS**		80 mg/kg	10
		Acesulfame potassium	950	1,000 mg/kg	188
		Aspartame	951	2,000 mg/kg	191
		CAROTENOIDS		100 mg/kg	209
		Calcium aluminium silicate	556	570 mg/kg	6, 259
		Caramel III - ammonia caramel	150c	5,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	5,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Grape skin extract	163(ii)	150 mg/kg	201, 209, 181
		Neotame	961	65 mg/kg	
		PHOSPHATES		4,400 mg/kg	[52][88, 33]
		POLYSORBATES		4,000 mg/kg	
		Propylene glycol esters of fatty acids	477	GMP	
		RIBOFLAVINS		300 mg/kg	
		Sodium alumino silicate	554	570 mg/kg	6, 259
		Steviol glycosides	960	330 mg/kg	26, 201

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
1.6	**Cheese and analogues**				
1.6.1	**Unripened cheese**	Aspartame	951	1,000 mg/kg	191
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN, COPPER COMPLEXES		50 mg/kg	
		Canthaxanthin	161g	15 mg/kg	201
		Caramel III - ammonia caramel	150c	15,000 mg/kg	201
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	201
		Indigotine (Indigo carmine)	132	200 mg/kg	3
		Lauric arginate ethyl ester	243	200 mg/kg	
		Natamycin (Pimaricin)	235	40 mg/kg	80, 3
		PHOSPHATES		4,400 mg/kg	33
		POLYSORBATES		80 mg/kg	38
		Ponceau 4R	124	100 mg/kg	3
		RIBOFLAVINS		300 mg/kg	
		SORBATES		2,000 mg/kg	42, 223 (for channa and paneer only)
		Nisin	234	12.5 mg/kg	(for channa and paneer only)

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Propionic acid, sodium propionate, calcium propionate,	280, 281, 282, 283	3,000 mg/kg	(for channa and paneer only)(singly or in combination, expressed as propionic acid)
		Glucono delta lactone	575	GMP	(for channa and paneer only)
		Sunset yellow FCF	110	100 mg/kg	3
		Calcium chloride	509	200 mg/kg	Except cream cheese
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	Except coulommiers
		Carrageenan	407	5,000 mg/kg	For cream cheese only
		Alginate of sodium/potassium/calcium	401,402, 404	5,000 mg/kg	For cream cheese only
		Propylene glycol alginate	405	5000 mg/kg	
		Paprika extract	160c	GMP	
		Curcumin	100	GMP	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Annatto	[52][160b(i) and (ii)]	GMP	
1.6.2	**Ripened cheese, (Cheddar,Danbo,Edam,Gouda, Havarti,Tilisiter ,Camembert, Brie,St Paulin, Samsoe,Emmentaler, Provolone,extra hard grating /sliced/cut/shredded cheese)**	Canthaxanthin	161g	15 mg/kg	201
		Lysozyme	1105	GMP	
		Natamycin (Pimaricin)	235	40 mg/kg	3, 80
		Nisin	234	12 mg/kg	
		SORBATES		3,000 mg/kg	42
		Calcium chloride	509	200 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		Sodium salts of mono/di/poly phosphoric acid	339, 450(i, ii, iii) 451(i),452(i)	9,000 mg/kg	Total salt content should not exceed 9000 mg/kg calculated as phosphohorus/carbonates /citrate/ chloride
		Potassium salts of mono/di/poly phosphoric acid	340, 450 (iv), (v), 451(ii), 452(ii)		
		Curcumin	100	100 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	100 mg/kg	
		Annatto extracts, norbixin-based	160b(ii)	100 mg/kg	
		Annatto extracts, bixin-based	160b(i)	50 mg/kg	Normal to orange colour
		Propionic acid, sodium propionate, calcium propionate,	280, 281, 282, 283	3,000 mg/kg	Singly or in combination, expressed as

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
					propionic acid
		[69][****]			
		Paprika extract	160c	GMP	
1.6.2.1	**Ripened cheese includes rind**	**ASCORBYL ESTERS**		500 mg/kg	
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN, COPPER COMPLEXES		15 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Hexamethylene tetramine	239	25 mg/kg	[52][66, 298]
		Lauric arginate ethyl ester	243	200 mg/kg	
		Lysozyme	1105	GMP	
		Natamycin (Pimaricin)	235	40 mg/kg	
		Nisin	234	12 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SORBATES		3,000 mg/kg	
1.6.2.2	**Rind of ripened cheese**	Allura red AC	129	100 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		CAROTENOIDS		500 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN, COPPER COMPLEXES		75 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Grape skin extract	163(ii)	1,000 mg/kg	
		IRON OXIDES		100 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Lysozyme	1105	GMP	
		Microcrystalline wax	905c(i)	30,000 mg/kg	
		Natamycin (Pimaricin)	235	40 mg/kg	
		Nisin	234	12 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SORBATES		3,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
1.6.2.3	**Cheese powder**	**CAROTENOID**		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN, COPPER COMPLEXES		50 mg/kg	
		Canthaxanthin	161g	15 mg/kg	201
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Lysozyme	1105	GMP	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Natamycin (Pimaricin)	235	40 mg/kg	3, 80
		Nisin	234	12 mg/kg	
		SORBATES		3,000 mg/kg	42
1.6.3	**Whey cheese**	Lauric arginate ethyl ester	243	200 mg/kg	
		SORBATES		1,000 mg/kg	42
1.6.4	**Processed cheese**				
1.6.4.1	**Plain processed cheese/ processed cheese, processed cheese spreads**	Allura red AC	129	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		IRON OXIDES		50 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	80,3
		Natamycin (Pimaricin)	235	40 mg/kg	
		PHOSPHATES		9,000 mg/kg	[69][33]
		RIBOFLAVINS		300 mg/kg	
		SODIUM ALUMINIUM PHOSPHATES		1,600 mg/kg	251, 6
		SORBATES		3,000 mg/kg	42
		Sunset yellow FCF	110	100 mg/kg	3
		Curcumin	100	100 mg/kg	
		Chlorophyll	140	100 mg/kg	
		Annatto	160(b) (i), (ii)	50 mg/kg	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Nisin	234	12.5 mg/kg	
1.6.4.2	**Flavoured processed cheese, including containing fruit, vegetables, meat etc.**	Allura red AC	129	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN, COPPER COMPLEXES		50 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	72
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Grape skin extract	163(ii)	1,000 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		IRON OXIDES		50 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		Natamycin (Pimaricin)	235	40 mg/kg	3, 80
		PHOSPHATES		9,000 mg/kg	33
		Ponceau 4R	124	100 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SODIUM ALUMINIUM PHOSPHATES		1600 mg/kg	251, 6
		SORBATES		3,000 mg/kg	42

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Sunset yellow FCF	110	100 mg/kg	
1.6.5	**Cheese analogues**	Acesulfame potassium	950	350 mg/kg	188
		Allura red AC	129	100 mg/kg	3
		Aspartame	951	1,000 mg/kg	191
		Brilliant blue FCF	133	100 mg/kg	3
		CAROTENOIDS		200 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN, COPPER COMPLEXES		50 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	201
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	3
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Grape skin extract	163(ii)	1,000 mg/kg	
		HYDROXYBENZOATES, PARA-		500 mg/kg	27,
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		Natamycin (Pimaricin)	235	40 mg/kg	3, 80
		Neotame	961	33 mg/kg	
		Nisin	234	12 mg/kg	
		PHOSPHATES		9,000 mg/kg	
		Ponceau 4R	124	100 mg/kg	3
		RIBOFLAVINS		300 mg/kg	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		SACCHARINS		100 mg/kg	
		SORBATES		3,000 mg/kg	42
		Sucralose (Trichlorogalactosucrose)	955	500 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	3
1.6.6	**Whey protein cheese**	Acetic acid, glacial	260	GMP	
		Calcium propionate	282	3,000 mg/kg	70
		Citric acid	330	GMP	
		Glucono delta-lactone	575	GMP	
		Lactic acid, L-, D- and DL-	270	GMP	
		Malic acid, DL-	296	GMP	
		Natamycin (Pimaricin)	235	40 mg/kg	80,3
		Nisin	234	12 mg/kg	
		Propionic acid	280	3,000 mg/kg	
		SORBATES		3,000 mg/kg	70, 42
		Sodium propionate	281	3,000 mg/kg	70
1.7	**Dairy based desserts**	**ASCORBYL ESTERS**		500 mg/kg	10, 2
		Acesulfame potassium	950	350 mg/kg	188
		[75][Alitame	956	100 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Allura red AC	129	100 mg/kg	
		Ammonium salts of phosphatidic acid	442	5,000 mg/kg	231
		Aspartame	951	1,000 mg/kg	191
		Aspartame-acesulfame salt	962	350 mg/kg	113
		BENZOATES		300 mg/kg	13

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	Only for rasgulla dry mixes
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN, COPPER COMPLEXES		500 mg/kg	
		Caramel III - ammonia caramel	150c	2,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	3,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Fast green FCF	143	100 mg/kg	2
		Grape skin extract	163(ii)	200 mg/kg	181
		HYDROXYBENZOATES, PARA-		120 mg/kg	27
		IRON OXIDES		100 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	170
		Neotame	961	100 mg/kg	
		PHOSPHATES		1,500 mg/kg	
		POLYSORBATES		3,000 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		Propyl gallate	310	90 mg/kg	15, 2
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		SACCHARINS		100 mg/kg	
		SORBATES		1,000 mg/kg	42
		Steviol glycosides	960	330 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	400 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		Propylene glycol alginate	405	GMP	
		Polyoxyethylene sorbitan tristearate	436	GMP	
		Poly glycerol esters of fatty acid	475	GMP	
		Polyoxyethylene sorbyton mono Laureate	432	GMP	
		Polyoxyethylene sorbyton monosterate	435	GMP	
		Distarch glycerol	1411	GMP	
		Distarch glycerol acetylated	1432	GMP	
		Distarch glycerol hydroxypropyl	1443	GMP	
		Microcrystalline cellulose	460 (i)	10, 000 mg/kg	
		TARTRATES		1,000 mg/kg	
		Curcumin	100	100 mg/kg	
		Annatto	160 b(i), (ii)	100 mg/kg	
		Carmoisine	122	100 mg/kg	
		Erythrosine	127	50 mg/kg	
		Tartrazine	102	100 mg/kg	
		[73][TOCOPHEROLS		500 mg/kg	XS243]

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
1.8	**Whey and whey products excluding whey cheeses**				
1.8.1	**Liquid whey and whey products excluding whey cheeses**	Benzoyl peroxide	928	100 mg/kg	74
		PHOSPHATES		880 mg/kg	33, 228
1.8.2	[52]**[Dried whey and whey products, excluding whey cheeses]**	Benzoyl peroxide	928	100 mg/kg	147
		Calcium carbonate	170(i)	10,000 mg/kg	
		Calcium chloride	509	GMP	
		Calcium hydroxide	526	GMP	
		Calcium silicate	552	10,000 mg/kg	
		Hydroxypropyl distarch phosphate	1442	10,000 mg/kg	
		Magnesium carbonate	504(i)	10,000 mg/kg	
		Magnesium oxide	530	10,000 mg/kg	
		Magnesium silicate, synthetic	553(i)	10,000 mg/kg	
		Microcrystalline cellulose (Cellulose gel)	460(i)	10,000 mg/kg	
		PHOSPHATES		4,400 mg/kg	33
		Potassium carbonate	501(i)	GMP	
		Potassium chloride	508	GMP	
		Potassium dihydrogen citrate	332(i)	GMP	
		Potassium hydrogen carbonate	501(ii)	GMP	
		Potassium hydroxide	525	GMP	
		Powdered cellulose	460(ii)	10,000 mg/kg	
		Silicon dioxide, amorphous	551	10,000 mg/kg	
		Sodium aluminosilicate	554	1,140 mg/kg	6

Table 1

Dairy products and analogues, excluding products of category 2.0					
Food Category System (1)	**Food Category Name (2)**	**Food Additive (3)**	**INS No. (4)**	**Recommended Maximum Level (5)**	**Note (6)**
		Sodium carbonate	500(i)	GMP	
		Sodium dihydrogen citrate	331(i)	GMP	
		Sodium hydrogen carbonate	500(ii)	GMP	
		Sodium hydroxide	524	GMP	
		Sodium sesquicarbonate	500(iii)	GMP	
		Talc	553(iii)	10,000 mg/kg	
		Tripotassium citrate	332(ii)	GMP	
		Trisodium citrate	331(iii)	GMP	

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
2.0	**Fats and oils, and fat emulsions**				
2.1	**Fats and oils essentially free from water**				
2.1.1	**Butter oil, anhydrous milk fat and ghee (no additives in case of ghee)**	**ASCORBYL ESTERS**		500 mg/kg	10,171
		Butylated hydroxyanisole (BHA)	320	175mg/kg	15, 171, 133
		Butylated hydroxytoluene (BHT)	321	75mg/kg	15, 171, 133

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Propyl gallate	310	100 mg/kg	15, 133, 171
		Gallate(octyl/ ethyl/dodecyl)	311, 313, 312	100 mg/kg	
		Citric acid	330	GMP	171
2.1.2	**[69][Vegetable oils, fats and bakery shortenings]**	Lecithins	[69][322 (i), 322 (ii)]	GMP	
		Ascorbic acid	300	GMP	
		Propyl gallate	310	200 mg/kg	15, 130
		[52][**TOCOPHEROLS**		GMP	
		ASCORBYL ESTERS		500mg/kg]	
		Butylated hydroxyanisole (BHA)	320	200mg/kg	130, 15
		Butylated hydroxytoluene (BHT)	321	200mg/kg	130, 15
		Citric acid	330,	GMP	15, 277
		Tartric acid	334	GMP	15, 277
		Guaiac resin	314	1,000 mg/kg	
		TBHQ	319	200 mg/kg	15 ,130
		Sodium citrate	[69][331(i)]	GMP	
		Isopropyl citrate mixture	384	200 mg/kg	
		[69][Citric and fatty acid esters of glycerol]	472c	100 mg/kg	Singly or in combination
		Phosphoric acid	338	100 mg/kg	Singly or in combination

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Polydimethylsiloxane	900a	10 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		CAROTENOIDS		25 mg/kg	232
		Diacetyltartaric acid and fatty acid esters of glycerol	472e	10,000 mg/kg	
		POLYSORBATES		5,000 mg/kg	102
		Propylene glycol esters of fatty acids	477	10,000 mg/kg	
		Stearyl citrate	484	GMP	
		THIODIPROPIONATES		200 mg/kg	46
		[69][Lactic and fatty acid esters of glycerol	472b	10,000 mg/kg	408
		Mono and diglycerides of fatty acids	471	GMP	408
		Polyglycerol esters of fatty acid	475	5,000 mg/kg	408]
2.1.3	**Lard, tallow, fish oil, and other animal fats (edible fats)**	Lecithins	322(i), (ii)	GMP	
		Ascorbic acid	300	GMP	
		Propyl gallate	310	200 mg/kg	15, 130
		TOCOPHEROLS		GMP	
		ASCORBYL ESTERS		500 mg/kg	10

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	130, 15
		Butylated hydroxytoluene (BHT)	321	200 mg/kg	130, 15
		Citric acid	330	GMP	
		Tartric acid	334	GMP	
		Guaiac resin	314	1,000 mg/kg	
		TBHQ	319	200 mg/kg	15,130
		Sodium citrate	331(iii)	GMP	
		Phosphoric acid	338	100 mg/kg	
		Dimethyl polysiloxane	900a	10 mg/kg	Singly or in combination with silicon dioxide
		Silicon dioxide	551		
		beta-Carotenes, vegetable	161a(ii)	1,000 mg/kg	
		CAROTENOIDS		25 mg/kg	
		Diacetyl tartaric acid and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Indigotine	132	100 mg/kg	
		Isopropyl citrate mixture	384	200 mg/kg	
		POLYSORBATES		5,000 mg/kg	102
		Propylene glycol esters of fatty acids	477	10,000 mg/kg	

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Stearyl citrate	484	GMP	
		Sunset yellow FCF	110	100 mg/kg	
		THIODIPROPIONATES		200 mg/kg	46
2.2	**Fat emulsions mainly of type water-in-oil**				
2.2.1	**Butter (Butter and Milk Fat)**	Curcumin	100	100 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	
		Annatto	160b(i),(ii)	20 mg/kg	8
		CAROTENOIDS		35 mg/kg	146, 291
		Sodium hydroxide	524	GMP	
		Calcium hydroxide	526		
		PHOPHATES		880 mg/kg	33, 34
		Sodium carbonate	500(i)	GMP	
		Sodium hydrogen carbonate	500(ii)	GMP	
2.2.2	**[69][Fat spreads, dairy fat spreads and blended spreads (margarine and fat spreads)]**	Lecithins	322(i), (ii)	GMP	
		Propyl gallate	310	200 mg/kg	15, 130
		Tocopherols	307a,b,c	GMP	
		ASCORBYL ESTERS		500 mg/kg	10
		Butylated hydroxyanisole (BHA)	320	200mg/kg	130, 15

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Butylated hydroxytoluene (BHT)	321	200mg/kg	130, 15
		Tartric acid	334	GMP	
		Guaiac resin	314	1,000 mg/kg	
		TBHQ	319	200 mg/kg	15, 130
		Isopropyl citrate mixture	384	100 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10 g/kg	
		1,2 -propylene glycol esters of fatty acids	477	20g/kg	
		[52]**[SORBITAN ESTERS OF FATTY ACIDS**		10,000 mg/kg	359]
		Sucroglycerides	474	10,000mg/kg	102
		SORBATES		[69][1,000 mg/kg]	42
		beta-Carotenes, vegetable	160a(ii)	1,000mg/kg	
		Annatto	160b	20 mg/kg	
		Curcumin	100	5 mg/kg	
		CAROTENOIDS		35 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		[69][50 mg/kg]	21
		BENZOATES		1,000mg/kg	13
		Canthaxanthin	161g	15 mg/kg	214, 215

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Caramel III - Ammonia caramel	150c	500 mg/kg	
		Caramel IV- Sulfite ammonia caramel	150d	500 mg/kg	214
		HYDROXY BENZOATES, PARA		300 mg/kg	27
		Lauric alginate ethyl ester	243	200 mg/kg	214, 215
		PHOSPHATES		2,200 mg/kg	33
		Polydimethylsiloxane	900a	10 mg/kg	152
		POLYSORBATES		5,000 mg/kg	102
		RIBOFLAVINS		300 mg/kg	
		Stearyl citrate	484	100 mg/kg	15
		STEAROYL LACTYLATES	481(i), 482(i)	10,000 mg/kg	
		Thermally oxidized soya bean oil interacted with mono- and diglycerides of fatty acids	479	5,000 mg/kg	
		THIODIPROPIONATES		200 mg/kg	46
		[52][Sucrose oligoesters, Type I and Type II	473a	10,000 mg/kg	348, 360
		Sucrose esters of fatty acids	473	10,000 mg/kg	348, 360
		Poly glycerol esters of fatty acid	475	5,000 mg/kg	359]

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
2.3	**Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions**	Acesulfame potassium	950	1,000 mg/kg	188
		ASCORBYL ESTERS		500 mg/kg	10
		Aspartame	951	1,000 mg/kg	191
		BENZOATES		1,000 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200mg/kg	130, 15
		Butylated hydroxytoluene (BHT)	321	200mg/kg	130, 15
		Canthaxanthhin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	20,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		CAROTENOIDS		200 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		HYDROXYBENZOATES,PARA-		300 mg/kg	27
		Indigotine (indigo caramine)	132	100 mg/kg	
		Neotame	961	10 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		POLYSORBATES		5,000 mg/kg	102
		Propyl gallate	310	200 mg/kg	15, 130
		Propylene glycol esters of fatty acids	477	30,000 mg/kg	

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		RIBOFLAVINS		300 mg/kg	
		SORBATES		1,000 mg/kg	42
		[52][Poly glycerol esters of fatty acid	475	20,000 mg/kg	363
		Propylene glycol alginate	405	3,000 mg/kg	
		STEAROYL LACTYLATES		3,000 mg/kg	
		SORBITAN ESTERS OF FATTY ACIDS		5,000 mg/kg	363
		Sucrose esters of fatty acids	473	5,000 mg/kg	363, 102]
		Sucroglycerides	474	10,000 mg/kg	102
		Tertiary butylhydroquinone	319	200 mg/kg	15, 130
2.4	**Fat-based desserts excluding dairy-based dessert products of food category 1.7 (frozen desserts/frozen confections)**	Propylene glycol alginate	405	10 g/kg	
		Polyglycerol esters of fatty acids	475	10 g/kg	
		Polyoxethylene sorbitian monolaureate	432	10 g/kg	
		Polyoxethylene sorbitian tristearate	436	10 g/kg	
		Polyoxethylene sorbitian monolstearate	435	10 g/kg	
		Aspartame	951	1,000 mg/kg	191
		Sucralose	955	400 mg/kg	
		Curcumin	100	100 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		RIBOFLAVINS		300 mg/kg	
		Annatto	160b	100 mg/kg	
		Beta apo -8-carotenal	160e	100 mg/kg	
		Methyl ester of beta apo- 8-carotenal	160f		
		Caramel color - ammonium sulphite process	150d	3 g/kg	
		TARTRATES		1 g/kg	
		Acesulfame potassium	950	350 mg/kg	188
		Allura red AC	129	100 mg/kg	
		ASCORBYL ESTERS	304, 305	80 mg/kg	10
		Aspartame-acesulfame salt	962	350 mg/kg	113
		BENZOATES		1,000 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	130, 15
		Butylated hydroxytoluene (BHT)	321	200 mg/kg	130, 15
		Canthaxanthin	161g	100 mg/kg	
		Caramel III - ammonia caramel	150c	20,000 mg/kg	
		CAROTENOIDS		150 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYL		500 mg/kg	

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		LINS, COPPER COMPLEX			
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Grape skin estract	163(ii)	200 mg/kg	181
		Indigotine (indigo caramine)	132	100 mg/kg	
		IRON OXIDES		350 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPHATES		1,500 mg/kg	33
		POLYSORBATES		3,000 mg/kg	102
		Ponceau 4R	124	50 mg/kg	
		Propyl gallate	310	200 mg/kg	15, 130
		Propylene glycol esters of fatty acids	477	40,000 mg/kg	
		SACCHARINS		100 mg/kg	
		SORBATES		1,000 mg/kg	42
		Sucroglycerides	474	5,000 mg/kg	
		Sunset yellow FCF	110	50 mg/kg	
		Tertiary butylhydroquinone	319	200 mg/kg	15, 130
2.4.1	**Cocoa based spreads including fillings**	Acesulfame potassium	950	1,000 mg/kg	188
		[75][Alitame	956	300 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Aspartame	951	3,000 mg/kg	191
		BENZOATES		1,500 mg/kg	13
		Propyl gallate	310	200 mg/kg	15, 130
		ACSCORBYL ESTERS		500 mg/kg	10, 15,114

Table 2

Fats and oils, and fat emulsions					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Mineral oil, high viscosity	905d	2,000 mg/kg	3
		Mineral oil, medium and low viscosity, class I	905e	2,000 mg/kg	3
		ETHYLENE DIAMINE TETRA ACETATES		50 mg/kg	21
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		Lauric arginate ethyl ester	243	200 mg/kg	
		PHOSPHATES		880 mg/kg	33
		POLYSORBATES		1,000 mg/kg	
		SACCHARINS		200 mg/kg	
		Sucralose (Trichlorogalacto sucrose)	955	400 mg/kg	169

Table 3

Edible ice, including sorbet					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum level**	**Notes**
3.0	**Edible ices, including sorbet (ice candy)**	**ASCORBYL ESTERS**		200 mg/kg	10,15
		Acesulfame potassium	950	800 mg/kg	188
		[75][Alitame	956	100 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Allura red AC	129	100 mg/kg	

Table 3

Edible ice, including sorbet					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum level**	**Notes**
		Aspartame	951	1,000 mg/kg	191
		Brilliant blue FCF	133	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200mg/kg	195, 15
		Butylated hydroxytoluene (BHT)	321	100mg/kg	195, 15
		CAROTENOIDS		200mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		500 mg/kg	
		Caramel III - ammonia caramel	150c	GMP	
		Caramel IV - sulfite ammonia caramel	150d	3,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	1,000 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	100 mg/kg	181
		IRON OXIDES		300 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPHATES		7,500 mg/kg	33
		POLYSORBATES		1,000 mg/kg	
		Ponceau 4R	124	100mg/kg	

Table 3

Edible ice, including sorbet					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum level**	**Notes**
		Propylene glycol esters of fatty acids	477	[52][5,000 mg/Kg]	
		RIBOFLAVINS		500 mg/kg	
		SACCHARINS		100 mg/kg	
		Sucralose (Trichlorogalacto sucrose)	955	320 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	15 , 195
		Sunset yellow FCF	110	100 mg/kg	
		Tertiary butylhydroquinon e (TBHQ)	319	200 mg/kg	
		Propylene glycol alginate	405	10,000 mg/kg	
		Polyglycerol esters of fattty acids	475	10,000 mg/kg	
		Polyoxyethylene sorbitan monolaureate	432	10,000 mg/kg	
		Polyoxyethylene sorbitan tristearate	436	10,000 mg/kg	
		Polyoxyethylene sorbitan monostearate	435	10,000 mg/kg	
		Curcumin	100	100 mg/kg	
		Annatto	160b	100 mg/kg	
		Canthaxanthin	161g	100mg/kg	
		Carmoisine	122	100mg/kg	
		Erythrosine	127	50mg/kg	
		Tartrazine	102	100mg/kg	

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Table 3

Edible ice, including sorbet					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum level**	**Notes**
		Indigotine (Indigo carmine)	132	100mg/kg	
		TARTRATES		1 g/kg	
		Steviol glycosides	960	170 mg/kg	26

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
4.0	**Fruits and vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes and aloe vera), sea weeds, nuts and seeds**				
4.1	**Fruits**				
4.1.1	**Fresh fruits**	No additives permitted			
4.1.1.1	**Untreated fresh fruits**	No additives permitted			
4.1.1.2	**Surface-treated fresh fruits**	Beeswax	901	GMP	
		Candelilla wax	902	GMP	
		Carnauba wax	903	GMP	
		Glycerol ester of wood rosin	445(iii)	110 mg/kg	
		IRON OXIDE		1,000 mg/kg	4
		Microcrystalline wax	905c(i)	50 mg/kg	
		ortho-Phenylphenol	231	12 mg/kg	49
		Sodium ortho-phenylphenol	232		
		Polyethylene glycol	1521	GMP	
		Polyvinylpyrrolidone	1201	GMP	
		SULFITES		30 mg/kg	
		Shellac, bleached	904	GMP	
		Sucroglycerides	474	GMP	
4.1.1.3		Calcium ascorbate	302	GMP	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	[52]**[Peeled or cut minimally processed fruits]**	Carbon dioxide	290	GMP	59
		Nitrogen	941	GMP	59
		Nitrous oxide	942	GMP	
		Potassium ascorbate	303	GMP	
		Sodium ascorbate	301	GMP	
		Calcium chloride,	509	350 mg/kg	
		Calcium lactate	327		
		Calcium gluconate	578		
		Calcium carbonate	170(i)		
		[52][Citric acid	330	GMP	
		Ascorbic acid	300	GMP	
		Potassium carbonate	501	GMP]	
4.1.2	**Processed fruits**	Carnauba wax	903	GMP	
		SULFITES		500 mg/kg	
4.1.2.1	**Frozen fruits**	**SULFITES**		500 mg/kg	44, 155
4.1.2.2	**Dried fruits, nuts and seeds**	**ASCORBYL ESTERS**		80 mg/kg	10
		BENZOATES		800 mg/kg	13
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		265 mg/kg	21
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		HYDROXYBENZOATES, PARA		800 mg/kg	27
		Lauric arginate ethyl ester	243	200 mg/kg	
		Mineral oil, high viscosity	905d	5,000 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Mineral oil, medium viscosity, class I	905e	5,000 mg/kg	
		Calcium phosphate	341(i)	20,000 mg/kg	
		Magnesium phosphate	343(ii)	20,000 mg/kg	
		SORBATES		500 mg/kg	42
		SULFITES		1,000 mg/kg	44, 135, 218
		Tartaric acid, L (+)	334	GMP	
4.1.2.3	**Fruit in vinegar, oil, or brine**	Acesulfame potassium	950	200 mg/kg	188
		Aspartame	951	300 mg/kg	144, 191
		BENZOATES		250 mg/kg	13
		CAROTENOIDS		1,000 mg/kg	
		CHLOROPHYLLS and CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	
		Caramel III - ammonia caramel	150c	200 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	7,500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	1,000 mg/kg	
		ETHYLENE DIAMINE TETRA		250 mg/kg	21

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		ACETATES (EDTA)			
		Grape skin extract	163(ii)	1,500 mg/kg	
		HYDROXYBENZOATES, PARA		250 mg/kg	27
		Neotame	961	100 mg/kg	
		PHOSPHATES		2,200 mg/kg	
		Polydimethylsiloxane	900a	10 mg/kg	
		SACCHARINS		160 mg/kg	144
		SORBATES		1,000 mg/kg	42
		SULFITES		100 mg/kg	44
		Sucralose (Trichlorogalactosucrose)	955	180 mg/kg	144
4.1.2.4	**Canned or bottled (pasteurized) fruit**	Acesulfame potassium	950	350 mg/kg	188
		Annatto	160b	200 mg/kg	
		Aspartame	951	1,000 mg/kg	191
		Aspartame-acesulfame salt	962	350 mg/kg	113
		Canthaxanthin	161g	200 mg/kg	
		Brilliant blue FCF	133	200 mg/kg	
		Carmoisine	122	200 mg/kg	
		CAROTENOIDS		200 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	
		Caramel III - ammonia caramel	150c	200 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	7,500 mg/kg	
		Curcumin	100	200 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Dimethyl polysiloxane	900a	10 mg/kg	
		Erythrosine	127	100 mg/kg	
		Fast green FCF	143	200 mg/kg	
		Grape skin extract	163(ii)	1,500 mg/kg	
		IRON OXIDES		300 mg/kg	
		Indigotine (Indigo carmine)	132	200 mg/kg	
		Neotame	961	33 mg/kg	
		Ponceau 4R	124	200 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		200 mg/kg	
		Stannous chloride	512	20 mg/kg	43
		Tartrazine	102	200 mg/kg	
		Sunset yellow FCF	110	200 mg/kg	
		Sucralose (Trichlorogalacto sucrose)	955	400 mg/kg	
		Steviol glycosides	960	100 mg/kg	26
		Saffron		GMP	
4.1.2.5	**Jams, jellies, marmalades**	Acesulfame potassium	950	1,000 mg/kg	188
		[75][Alitame	956	100 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Allura red AC	129	100 mg/kg	
		Annatto	160b	GMP	
		Aspartame	951	1,000 mg/kg	191
		Aspartame-acesulfame salt	962	1,000 mg/kg	113
		Brilliant blue FCF	133	200 mg/kg	
		BENZOATES		1,000 mg/kg	13

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		CAROTENOIDS		200 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		200 mg/kg	
		Canthaxanthin	161g	200 mg/kg	
		Caramel III - ammonia caramel	150c	200 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	1,500 mg/kg	
		Carmoisine	122	200 mg/kg	
		Carnauba wax	903	400 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Curcumin	100	GMP	
		Dimethylpolysiloxane	900a	10 mg/kg.	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		130 mg/kg	21
		Erythrosine	127	100 mg/kg	
		Fast green FCF	143	200 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	
		HYDROXYBENZOATES PARA-		250 mg/kg	27
		IRON OXIDES		200 mg/kg	
		Indigotine (Indigo carmine)	132	200 mg/kg	
		Neotame	961	70 mg/kg	

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Polydimethylsiloxane	900a	30 mg/kg	
		Ponceau 4R	124	200 mg/kg	
		RIBOFLAVINS		200 mg/kg	
		SACCHARINS		200 mg/kg	
		SORBATES		1,000 mg/kg	42
		SULFITES		100 mg/kg	44
		Steviol glycosides	960	360 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	400 mg/kg	
		Tartaric acid, L (+)	334	GMP	
		Tartrazine	102	200 mg/kg	
		Sunset yellow FCF	110		
4.1.2.6	**Fruit-based spreads (e.g. chutney) excluding products of food category 4.1.2.5**	Annatto	160b	GMP	
		Aspartame	951	1,000 mg/kg	191
		BENZOATES		250 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		500 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLIN,COPPER COMPLEXES		150 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	500 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	500 mg/kg	
		Curcumin	100	GMP	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		100 mg/kg	21
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	
		HYDROXYBENZOATE PARA-		1,000 mg/kg	27
		IRON OXIDES		500 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Neotame	961	70 mg/kg	
		PHOSPHATES		1,100 mg/kg	33
		Polydimethylsiloxane	900a	10 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		Propylene glycol alginate	405	GMP	
		RIBOFLAVINS		500 mg/kg	
		SACCHARINS		200 mg/kg	
		SORBATES		1,000 mg/kg	42
		Sucralose (Trichlorogalactosucrose)	955	400 mg/kg	
		Tartaric acid, L (+)	334	GMP	
		Ascorbyl Palmitate	304	200 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		TBHQ	319	200 mg/kg	
		TOCOPHEROLS		GMP	

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Steviol glycosides	960	330 mg/kg	26
		Acesulfame potassium	950	500 mg/kg	188
4.1.2.7	**Candied / glazed / crystallised fruit including murrabba***	Allura red AC	129	100 mg/kg	
		Annatto	160b	200 mg/kg	
		Aspartame	951	2,000 mg/kg	191
		BENZOATES		1,000 mg/kg	13
		Brilliant blue FCF	133	200 mg/kg	
		Canthaxanthin	161g	200 mg/kg	
		CAROTENOIDS		200 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		250 mg/kg	
		Caramel III - ammonia caramel	150c	200 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	7,500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Curcumin	100	200 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	1,000 mg/kg	
		Erythrosine	127	100 mg/kg	
		Fast green FCF	143	200 mg/kg	
		Grape skin extract	163(ii)	1,000 mg/kg	
		HYDROXYBENZOATES PARA		1,000 mg/kg	27
		IRON OXIDES		250 mg/kg	
		Indigotine (Indigo carmine)	132	200 mg/kg	
		Neotame	961	65 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		PHOSPHATES		10 mg/kg	33
		Ponceau 4R	124	200 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SORBATES		500 mg/kg	42
		SULFITES		100 mg/kg and 40 mg/kg (for murabba)	44
		Sucralose (Trichlorogalacto sucrose)	955	800 mg/kg	
		Sunset yellow FCF	110	200 mg/kg	
		Tartrazine	102	200 mg/kg	
		Acesulfame potassium	950	500 mg/kg	188
		Tartaric acid	334	GMP	
		*No sweeteners and colours permitted in murrabba			
4.1.2.8	**Fruit preparations, including fruit pulp, purees, fruit toppings and coconut milk**	Acesulfame potassium	950	350 mg/kg	188
		Allura red AC	129	100 mg/kg	
		Aspartame-acesulfame salt	962	350 mg/kg	113
		Aspartame	951	1,000 mg/kg	191
		Annatto	160b(i), (ii)	GMP	
		BENZOATES		1,000 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYL		100 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		LINS, COPPER COMPLEXES			
		beta-Carotenes, vegetable	160a(ii)	100 mg/kg	182
		Caramel III - ammonia caramel	150c	7,500 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	7,500 mg/kg	
		Curcumin	100	GMP	
		Diacetyltartaric and fatty acid esters of glycerol	472e	2,500 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	
		HYDROXYBENZOATES PARA-		800 mg/kg	27
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPHATES		350 mg/kg	33
		Paprika oleoresin	160c(i)	GMP	
		SORBATES		1,000 mg/kg	42
		Ponceau 4R	124	50 mg/kg	
		Propylene glycol esters of fatty acids	477	40,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		200 mg/kg	
		SORBATES		1,000 mg/kg	42
		POLYSORBATES		1,000 mg/kg	154
		SULFITES		100 mg/kg	206, 44
		Steviol glycosides	960	330 mg/kg	26

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Sucralose (Trichlorogalacto sucrose)	955	400 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		52[**SORBITAN ESTERS OF FATTY ACIDS**		5,000 mg/kg	XS314R, XS240
		Sucrose esters of fatty acids	473	1,500 mg/kg	348, XS314R]
4.1.2.9	**Fruit-based desserts including fruit-flavoured water-based desserts**	Tartaric acid, L (+)	334	GMP	
		ASCORBYL ESTERS		500 mg/kg	2, 10
		Acesulfame potassium	950	350 mg/kg	188
		Allura red AC	129	100 mg/kg	
		Aspartame	951	1,000 mg/kg	191
		Aspartame-acesulfame salt	962	350 mg/kg	113
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		150 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		150 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	200 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	7,500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Diacetyltartaric and fatty acid esters of glycerol	472e	2,500 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	
		HYDROXYBENZOATES PARA-		800 mg/kg	27
		IRON OXIDES		200 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPAHTES		1,500 mg/kg	33
		SORBATES		3,000 mg/kg	
		Polydimethylsiloxane	900a	110 mg/kg	
		Ponceau 4R	124	50 mg/kg	
		Propyl gallate	310	90 mg/kg	2, 15
		Propylene glycol esters of fatty acids	477	40,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		100 mg/kg	
		SORBATES		1,000 mg/kg	42
		SULFITES		100 mg/kg	44
		Sucralose (Trichlorogalactosucrose)	955	400 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		Sunset yellow FCF	110	50 mg/kg	
		Steviol glycoside	960	350 mg/kg	26
4.1.2.10	**Fermented fruit products**	Acesulfame potassium	950	350 mg/kg	188
		Aspartame	951	1,000 mg/kg	191

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		BENZOATES		1,000 mg/kg	13
		CAROTENOIDS		500 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINSCOPPER COMPLEXES		100 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	200 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	2,500 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		250 mg/kg	21
		Grape skin extract	163(ii)	500 mg/kg	
		HYDROXYBENZOATES, PARA-		800 mg/kg	27
		Neotame	961	65 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		RIBOFLAVINS		500 mg/kg	
		Polydimethysiloxane	900a	10 mg/kg	
		SACCHARINS		160 mg/kg	
		SORBATES		1,000 mg/kg	42
		SULFITES		100 mg/kg	44
		Steviol glycosides	960	115 mg/kg	26

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Sucralose (Trichlorogalacto sucrose)	955	150 mg/kg	
4.1.2.11	**Fruit fillings for pastries**	Acesulfame potassium	950	350 mg/kg	188
		Allura red AC	129	100 mg/kg	
		Aspartame	951	1,000 mg/kg	191
		BENZOATES		1,000 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		500 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	7,500 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	7,500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	100 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		650 mg/kg	21
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	
		HYDROXYBENZOATES PARA-		800 mg/kg	27
		Indigotine (Indigo carmine)	132	100 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Lauric arginate ethyl ester	243	200 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPHATES		1,500 mg/kg	33
		SORBATES		3,000 mg/kg	
		Ponceau 4R	124	50 mg/kg	
		Propylene glycol esters of fatty acids	477	40,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SORBATES		1,000 mg/kg	42
		SULFITES		100 mg/kg	44
		Sucralose (Trichlorogalacto sucrose)	955	400 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		Steviol glycoside	960	330 mg/kg	26
4.1.2.12	**Cooked fruit**	Acesulfame potassium	950	500 mg/kg	188
		Aspartame	951	1,000 mg/kg	191
		BENZOATES		1,000 mg/kg	13
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	
		Neotame	961	65 mg/kg	
		SORBATES		1,200 mg/kg	42
		Sucralose (Trichlorogalacto sucrose)	955	150 mg/kg	

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
4.2	**Vegetables, sea weeds, nuts and seeds**				
4.2.1	**Fresh vegetables, sea weeds, nuts and seeds**	No additives permitted			
4.2.1.1	**Untreated fresh vegetables ((including mushrooms and fungi, roots and tubers, fresh pulses and legumes (including soybean), and aloe vera) sea weeds, nuts and seeds))**	No additives permitted			
4.2.1.2	**Surface treated fresh vegetables (including mushrooms and fungi, roots and tubers, fresh pulses and legumes, and aloe vera) sea weeds, nuts and seeds**	Candelilla wax	902	GMP	79
		Beeswax	901	GMP	79
		Carnauba wax	903	GMP	79
		Glycerol ester of wood rosin	445(iii)	110 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		Microcrystalline wax	905c(i)	50 mg/kg	
		PHOSPHATES		1,760 mg/kg	33
		Shellac, bleached	904	GMP	79
4.2.1.3	[52]**[Peeled, cut or shredded minimally processed vegetables**	Lauric arginate ethyl ester	243	200 mg/kg	
		PHOSPHATES		5,600 mg/kg	33,76
		Sodium ascorbate	301	GMP	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	[(including mushrooms and fungi, roots and tubers, fresh pulses and legumes, and aloe vera) sea weeds, nuts and seeds)]]	**SULFITES**		50 mg/kg	44,76,136
		Calcium chloride	509	350 mg/kg	
		Calcium lactate	327		
		Calcium gluconate	578		
		Calcium carbonate	170(i)		
		[52][Citric acid	330	GMP	
		Ascorbic acid	300	GMP	
		Calcium ascorbate	302	GMP	
		Potassium carbonate	501	GMP]	
4.2.2	**Processed vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) sea weeds, nuts and seeds**	Acetic acid, glacial	260	GMP	
		Caramel IV - Sulfite Ammonia Caramel	150d	50,000 mg/kg	92
		Ascorbic acid, L-	300	GMP	110
		Citric acid	330	GMP	242, 262, 264, 265
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		100 mg/kg	21, 110
		Lactic acid, L-, D- and DL-	270	GMP	262, 264
		Malic acid, dl-	296	GMP	265
		PHOSPHATES		5,000 mg/kg	33, 76
		Polydimethylsiloxane	900a	10 mg/kg	15
		SULFITES		50 mg/kg	44, 76, 136, 137

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
4.2.2.1	**Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) sea weeds, nuts and seeds**	Ascorbic acid, L-	300	GMP	110
		Citric acid	330	GMP	242, 262, 264, 265
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		100 mg/kg	21, 110
		Lactic acid, L-, D- and DL-	270	GMP	262, 264
		Malic acid, dl-	296	GMP	265
		PHOSPHATES		5,000 mg/kg	33, 76
		Polydimethylsiloxane	900a	10 mg/kg	15
		SULFITES		50 mg/kg	44, 76, 136, 137
		[52][Calcium chloride	509	GMP	323
		Calcium sulphate	516	GMP	323]
4.2.2.2	**Dried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) sea weeds, nuts and seeds**	**ASCORBYL ESTERS**		80 mg/kg	10
		BENZOATES		1,000 mg/kg	13
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	196, 15, 76
		Butylated hydroxytoluene (BHT)	321	200 mg/kg	196, 15, 76
		Canthaxanthin	161g	10 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Diacetyltartaric and fatty acid esters of glycerols	472e	10,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		800 mg/kg	21, 64, 297
		PHOSPHATES		5,000 mg/kg	33, 76
		Propyl gallate	310	50 mg/kg	15, 76,196
		SULFITES		500 mg/kg	44, 105
4.2.2.3	**Vegetables (including mushrooms and fungi, roots and tubers, fresh pulses and legumes, and aloe vera) sea weeds in vinegar, oil, brine or soybean sauce**	Allura red AC	129	100 mg/kg	
		Acesulfame potassium	950	200 mg/kg	144, 188
		Aluminium ammonium sulfate	523	520 mg/kg	6, 245,296
		Aspartame	951	300 mg/kg	144, 191
		Aspartame-acesulfame salt	962	200 mg/kg	113
		BENZOATES		2,000 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	
		Caramel III - ammonia caramel	150c	500 mg/kg	
		beta - Carotenes, , vegetable	160a(ii)	1,320 mg/kg	
		CAROTENOIDS		50 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerols	472e	2,500 mg/kg	
		ETHYLENE DIAMINE TETRA		250 mg/kg	21

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		ACETATES (EDTA)			
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	100 mg/kg	179, 181
		HYDROXYBENZOATES, PARA-		1,000 mg/kg	27
		Indigotine (indigo carmine)	132	100 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		Neotame	961	10 mg/kg	144
		PHOSPHATES		2,200 mg/kg	33
		Polydimethylsiloxane	900a	10 mg/kg	
		RIBOFLAVINS		500 mg/kg	
		SACCHARINS		160 mg/kg	144
		SORBATES		1000 mg/kg	42
		Sucralose (trichlorogalactosucrose)	955	400 mg/kg	
		SULFITES		100 mg/kg	44
		[52][Ferrous gluconate	579	150 mg/kg	48,23
		Ferrous lactate	585	150 mg/kg	48,23]
4.2.2.4	**Canned or bottled (pasteurised) or retort pouched vegetables (including mushrooms and fungi, roots and tubers, fresh**	Acesulfame potassium	950	200 mg/kg	188
		Allura red AC	129	200 mg/kg	
		Acesulfame potassium	950	350 mg/kg	188
		Aspartame	951	1,000 mg/kg	191
		Brilliant blue FCF	133	200 mg/kg	
		Caramel III - ammonia caramel	150c	200 mg/kg	

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	pulses and legumes, and aloe vera) sea weeds	beta-Carotenes, vegetable	160a(ii)	200 mg/kg	
		CAROTENOIDS		200 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		365 mg/kg	21
		Fast green FCF	143	200 mg/kg	
		Neotame	961	33 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		Polydimethylsiloxane	900a	10 mg/kg	
		SACCHARINS		160 mg/kg	144
		Ascorbic acid		GMP	
		Stannous chloride	512	25 mg/kg	43
		Steviol glycosides	960	70 mg/kg	26
		Sucralose (trichlorogalactosucrose)	955	580 mg/kg	
		SULFITES		50 mg/kg	44
4.2.2.5	**Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) sea weeds, nuts and seeds, purees and**	Aspartame	951	1,000 mg/kg	191
		Acesulfame potassium	950	1,000 mg/kg	188
		BENZOATES		1,000 mg/kg	13
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		CAROTENOIDS		50 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	spreads (peanut butter)	**CHLOROPHYLLS AND CHLOROPHYLINS,COPPER COMPLEXES**		100 mg/kg	62
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		250 mg/kg	21
		Grape skin extract	163(ii)	100 mg/kg	179, 181
		HYDROXYBENZOATES, PARA-		1,000 mg/kg	27
		Neotame	961	33 mg/kg	
		PHOSPHATES		2,200 mg/kg	33, 76
		Polydimethylsiloxane	900a	10 mg/kg	
		SACCHARINS		160 mg/kg	
		SORBATES		1,000 mg/kg	42
		Steviol glycosides	960	330 mg/kg	26
		Sucralose (trichlorogalactosucrose)	955	400 mg/kg	169
		SULFITES		500 mg/kg	44, 138
4.2.2.6	**Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) sea weeds, nuts and seeds-pulps and preparations**	Allura red AC	129	100 mg/kg	92
		Acesulfame potassium	950	350 mg/kg	188
		Aspartame	951	1,000 mg/kg	191
		Aspartame-acesulfame salt	962	350 mg/kg	113
		BENZOATES		3,000 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	92
		Caramel III - ammonia caramel	150c	50,000 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	(e.g vegetable desserts and sauces, candied vegetables) other than food category 4.2.2.5	beta - Carotenes, vegetable	160a(ii)	1,000 mg/kg	92
		CAROTENOIDS		50 mg/kg	92
		Chlorophylls And Chlorophylins,Copper Complexes		100 mg/kg	62, 92
		Diacetyltartaric and fatty acid esters of glycerols	472e	2,500 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		80 mg/kg	21
		Grape skin extract	163(ii)	100 mg/kg	92, 181
		HYDROXYBENZOATES PARA-		1,000 mg/kg	27
		Indigotine (indigo carmine)	132	100 mg/kg	92
		Neotame	961	33 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		Polydimethylsiloxane	900a	50 mg/kg	
		POLYSORBATES		3,000 mg/kg	
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	92
		SACCHARINS		200 mg/kg	
		SORBATES		1,000 mg/kg	42
		Steviol glycosides	960	165 mg/kg	26

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Sucralose (trichlorogalactosucrose)	955	400 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		SULFITES		300 mg/kg	44, 205
		Sunset yellow FCF	110	50 mg/kg	92
4.2.2.7	**Fermented vegetables(including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweed products, excluding fermented soybean products of food categories 6.8.6, 6.8.7, 12.9.1, 12.9.2.1 and 12.9.2.3**	Aspartame	951	2,500 mg/kg	191
		Acesulfame Potassium	950	1,000 mg/kg	188
		BENZOATES		1,000 mg/kg	13
		Brilliant blue FCF	133	100 mg/kg	92
		CAROTENOIDS		50 mg/kg	92
		Calcium 5'-ribonucleotides	634	GMP	279
		Calcium carbonate	170(i)	GMP	279
		Calcium chloride	509	GMP	279
		Calcium lactate	327	10,000 mg/kg	
		Calcium carbonate	170	GMP	
		Calcium bisulphite	227	500 mg/kg	
		Citric acid	330	GMP	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	62
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	

Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Diacetyltartaric and fatty acid esters of glycerol	472e	2,500 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		250 mg/kg	21
		Erythrosine	127	30 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	100 mg/kg	181
		HYDROXYBENZOATES PARA-		300 mg/kg	27
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Malic acid	296	GMP	
		Neotame	961	33 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		Polydimethylsiloxane	900a	10 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		RIBOFLAVINS		500 mg/kg	
		SACCHARINS		200 mg/kg	
		SORBATES		1,000 mg/kg	42
		SULFITES		500 mg/kg	44
		Sucralose (Trichlorogalactosucrose)	955	580 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	92
		Steviol glycoside	960	200 mg/kg	26
4.2.2.8	**Cooked or fried vegetables (including**	Aspartame	951	1,000 mg/kg	
		Benzoates		1,000 mg/kg	13
		L-Tartaric acid	334	GMP	

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Table 4

Fruits and vegetables					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweeds	**Chlorophylls and Chlorophyllins, copper complexes**		100 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Curcumin	100	GMP	
		Diacetyltartaric and fatty acid esters of glycerol	472e	2,500 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		250 mg/kg	21
		Neotame	961	33 mg/Kg	
		PHOSPHATES		2,200 mg/kg	33, 76
		SACCHARINS		160 mg/kg	144
		SORBATES		1,000 mg/kg	42,221
		Sucralose (Trichlorogalacto sucrose)	955	150 mg/kg	141
		Steviol glycoside	960	40 mg/kg	26

Table 5

Confectionary					
Food Category System	**Food Category Name**	**Food Additive**	**INS Number**	**Recommended Maximum level**	**Note**
5.0	**Confectionery**	**ASCORBYL ESTERS**		500 mg/kg	10, 15,114
		Mineral oil, medium viscosity	905e	2,000 mg/kg	3
		Polydimethylsiloxane	900a	10 mg/kg	
5.1	[52]**[Cocoa products and chocolate products including imitations and chocolate substitutes]**	Mineral oil, high viscosity	905d	2,000 mg/kg	3
		Propyl gallate	310	200 mg/kg	15, 130
5.1.1	**Cocoa mixes (powders) and cocoa mass/cake**	Acesulfame potassium	950	350 mg/kg	188
		Ammonium salts of phosphatidic acid	442	GMP	97
		Aspartame	951	3,000 mg/kg	191
		BENZOATES		15,00 mg/kg	
		SORBATES		1,500 mg/kg	
		PHOSPHATES		1,100 mg/kg	33
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	97
		SACCHARINS		100 mg/kg	97
		Sucrose esters of fatty acids	473	10 g/kg	
		Sucralose (Trichlorogalactosucrose)	955	580 mg/kg	97
		L-Tartaric acid	334	5 g/kg	
		[52][Polyglycerol esters of fatty acid	475	5,000 mg/kg	XS141, 97

		Polyglycerol esters of interesterified ricinoleic acid	476	5,000 mg/kg	XS141, 97
		SORBITAN ESTERS OF FATTY ACIDS		2,000 mg/kg	XS141, 97, 123]
5.1.2	**Cocoa mixes (syrups)**	Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	
		Acesulfame potassium	950	350 mg/kg	97,188
		[75][Alitame	956	300 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Aspartame	951	1,000 mg/kg	191
		Neotame	961	33 mg/kg	97
		POLYSORBATES		500 mg/kg	
		SACCHARINS		80 mg/kg	97
		SORBATES		1,000 mg/kg	42
		Sucralose (Trichlorogalacto sucrose)	955	400 mg/kg	97
		[52]**[TARTRATES**		2,000 mg/kg	45
		TOCOPHEROLS		500 mg/kg	15]
5.1.3	**Cocoa and chocolate products**	Acesulfame potassium	950	1,000 mg/kg	188
		Annatto	160b(i), (ii)	100 mg/kg	
		Grape skin extract	163(ii)	200 mg/kg	
		[52][omit		]	
		Allura red AC	129	100 mg/kg	183
		[75][Alitame	956	300 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			

Ammonium salts of phosphatidic acid	442	GMP	
Aspartame	951	3,000 mg/kg	191
Beeswax	901	GMP	3
Brilliant blue FCF	133	100 mg/kg	183
Butylated hydroxyanisole (BHA)	320	200 mg/kg	130, 141, 15
Butylated hydroxytoluene (BHT)	321	200 mg/kg	130, 141, 15
TBHQ	319	200 mg/kg	[52][15,130 ,141]
CAROTENOIDS		100 mg/kg	183
CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		[52][700 mg/kg]	62
Curcumin	100	100 mg/kg	
Candelilla wax	902	GMP	
Canthaxanthin	161g	100 mg/kg	
Caramel III - ammonia caramel	150c	50,000 mg/kg	
Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	
Carmoisine	122	100 mg/kg	
Carnauba wax	903	GMP	
beta-Carotenes, vegetable	160a(ii)	100 mg/kg	
ETHYLENE DIAMINE TETRA ACETATES (EDTA)		50 mg/kg	21

		Indigotine (Indigo carmine)	132	100 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		SORBATES		1,000 mg/kg	
		Mono and di glycerides of edible fatty acids	471	GMP	
		Neotame	961	100 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		PHOSPHATES		2,500 mg/kg	33
		Tartrazine	102	100 mg/kg	
		POLYSORBATES		[52][5,000 mg/kg]	101
		Ponceau 4R	124	100 mg/kg	183
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		500 mg/kg	
		Erythrosine	127	50 mg/kg	
		Shellac, bleached	904	GMP	3
		[52][omit		]	
		Carmoisine	122	100 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Sucralose (Trichlorogalacto sucrose)	955	800 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		[52][omit			]
		BENZOATES		1,500 mg/kg	
		[52][Polyglycerol esters of fatty acid	475	2,000 mg/kg	By weight in chocolates
		Polyglycerol esters of interesterified ricinoleic acid	476	5,000 mg/kg	101]

		[52][SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	101]
		Saffron		GMP	
		L - Tartaric acid	334	3 g/kg	
		[52][Castor Oil	1503	350 mg/kg	
		TOCOPHEROLS		750 mg/kg	15,168]
5.1.4	[52]**[Imitation Chocolate, Chocolate substitute products]**	Acesulfame potassium	950	500 mg/kg	188
		[75][Alitame	956	300 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Ammonium salts of phosphatidic acid	442	GMP	
		Aspartame	951	3,000 mg/kg	
		Aspartame-acesulfame salt	962	500 mg/kg	191
		BENZOATES		1,500 mg/kg	13
		[52][omit			]
		Butylated hydroxytoluene (BHT)	321	200 mg/kg	141, 15, 197
		Beeswax	901	GMP	3
		Candelilla wax	902	GMP	3
		Carnauba wax	903	GMP	3
		HYDROXYBENZOATES, PARA-		300 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		POLYSORBATES		5,000 mg/kg	
		SACCHARINS		500 mg/kg	
		SORBATES		1,500 mg/kg	
		Shellac, bleached	904	GMP	
		Sucralose	955	800 mg/kg	
		TOCOPHEROLS		750 mg/kg	
		Tartaric acid	334	5 g/kg	

		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		700 mg/kg	
		CAROTENOIDS		100 mg/kg	
		beta –Carotenes, vegetable	160a(ii)	100 mg/kg	
		Canthaxanthin	161g	100 mg/kg	
		Sulfur dioxide	220	150 mg/kg	
		Sorbitan monostearate	491	10 g/kg	
		Annatto	160b(i), (ii)	100 mg/kg	
		[52][Polyglycerol esters of interesterified ricinoleic acid	476	5,000 mg/kg	366]
		Caramel III	150c	50,000 mg/kg	
		Caramel IV	150d	50,000 mg/kg	
		Saffron		GMP	
		[52][Polydimethyl-siloxane	900a	10mg/kg	
		Polyglycerol esters of fatty acid	475	2,000mg/kg	366
		Sucroglycerides	474	6,000mg/kg	348
		Sucrose Oligoesters, Type-I and Type -II	473a	6,000mg/kg	348
		Sucrose esters of fatty acid	473	6,000mg/kg	348
		TARTRATES		5,000mg/kg	45
		TOCOPHEROLS		500 mg/kg	15
		SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	]
5.2	**Confectionery including hard**	Allura red AC	129	200 mg/kg	
		[75][Alitame	956	300 mg/kg	]

	and soft candy, nougats etc. other than food categories 5.1, 5.3, and 5.4	*[Amendment for omission of this provision w.e.f. 1st February 2022]*			
		Butylated hydroxyanisole (BHA)	320	200mg/kg	130, 15
		Butylated hydroxytoluene (BHT)	321	200mg/kg	130, 15
		IRON OXIDES		200 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	
		Propyl gallate	310	200 mg/kg	15, 130
		BENZOATES		1,500 mg/kg	13
		Diacetyltartaric and fatty acid esters of glycerol	472e	GMP	
		CAROTENOIDS		GMP	
		beta – Carotenes,vegetable	160a(ii)	500 mg/kg	
		Canthaxanthin	161g	GMP	
		Castor oil	1503	500 mg/kg	
		Candelilla wax	902	GMP	3
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		GMP	
		Tartrazine	102	100 mg/kg	
		Erythrosine	127	50 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Curcumin	100	GMP	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	
		Neotame	961	330 mg/kg	1, 61, 158

		HYDROXYBENZOATES , PARA-		1,000 mg/kg	27
		L-Tartaric acid	334	2,000 mg/kg	
		Tocopherol	307a,b, c	500 mg/kg	
		[70][Liquid paraffin	905e	GMP]	
		Calcium, magnesium, sodium salts of stearic acid	470(i)	GMP	
		Ammonium salts of phosphatidic acids	442	GMP	
		Ponceau 4R	124	100 mg/kg	
		Microcrystalline wax	905c(i)	GMP	3
		Beeswax	901	GMP	3
		RIBOFLAVINS		300 mg/kg	
		Carmoisine	122	100 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		SACCHARINS		500 mg/kg	163
		Sucralose (Trichlorogalacto sucrose)	955	1,800 mg/kg	
		Steviol glycosides	960	700 mg/kg	26, 199
		Sulfur dioxide	220	2,000 mg/kg	
		[52][omit		]	
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	15, 130
		SORBATES		1,500 mg/kg	42
		POLYSORBATES		1,000 mg/kg	
		Annatto	160b(i), (ii)	200 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	

		Sunset yellow FCF	110	100 mg/kg	
		Tartrazine	102	100 mg.kg	
		Indogotine (Indigo carmine)	132	100 mg/kg	
		Mineral oil, high viscosity	905d	2,000 mg/kg	3
		[52][Shellac, bleached	904	GMP	3
		Sucrose Oligoesters, Type-I and Type -II	473a	5,000mg/kg	348
		Sucrose esters of fatty acid	473	5,000mg/kg	348
		Polyglycerol esters of fatty acid	475	2,000mg/kg	367
		TARTRATES		2,000mg/kg	45
		Sodium di acetate	262 (ii)	1,000 mg/kg	
		STEROYL LACTILATES	481(i), 482(i)	5,000 mg/kg	]
5.2.1	**Hard candy**	Acesulfame potassium	950	3,500 mg/kg	188
		Carnauba wax	903	GMP	13
		Aspartame	951	10,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		700 mg/kg	
		Microcrystalline wax	905c(i)	GMP	3
		Neotame	961	330 mg/kg	
		Sucralose (Trichlorogalacto sucrose)	955	1,500 mg/kg	164
		Annatto	160b(i), (ii)	GMP	

		Mono and di glycerides of edible fatty acids	471	GMP	
		Lecithins	322 (i)	GMP	
		L-Tartaric acid	334	GMP	
		[52][Polyglycerol esters of interesterified ricinoleic acid	476	3,000mg/kg	
		TOCOPHEROLS		500 mg/kg	15
		SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg]	
5.2.2	**Soft candy**	Acesulfame potassium	950	3500 mg/kg	157, 188
		Annatto	160b(i), (ii)	GMP	
		Aspartame	951	3,000 mg/kg	148
		Carnauba wax	903	GMP	3
		Sulfur dioxide	220	2,000 mg/kg	
		Grape skin extract	163(ii)	1,700 mg/kg	181
		Shellac, bleached	904	GMP	3
		52[Polyglycerol esters of interesterified ricinoleic acid	476	3,000 mg/kg	
		Propylene glycol	1520	4,500 mg/kg	
		SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	
		Hydrogenated poly-1-decenes	907	2,000 mg/kg	
		Sucrose esters of fatty acid	473	5,000mg/kg	348]
5.2.3	**Nougats and marzipans**	Acesulfame potassium	950	1000 mg/kg	
		Aspartame	951	3,000 mg/kg	
		Brilliant blue FCF	133	200 mg/kg	

		Indigotine (indigocarmine)	132	200 mg/kg	
		Fast green FCF	143	200 mg/kg	
		CAROTENOIDS		100 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	
		Ponceau 4R	124	200 mg/kg	
		Carnauba wax	903	GMP	
5.3	**Chewing gum**	Carmoisine	122	100 mg/kg	
		Tartrazine	102	100 mg/kg	
		Acesulfame potassium	950	5,000 mg/kg	
		Annatto	160b (i), (ii)	GMP	
		[75][Alitame	956	300 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Curcumin	100	GMP	
		Aspartame	951	10,000 mg/kg	
		BENZOATES		1,500 mg/kg	
		Calcium aluminium silicate	556	100 mg/kg	Expressed as Aluminium
		Castor Oil	1503	2,100 mg/kg	
		Beeswax	901	GMP	
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		IRON OXIDES		10,000 mg/kg	
		Butylated hydroxyanisole (BHA)	320	400 mg/kg	130

		Butylated hydroxytoluene (BHT)	321	400 mg/kg	130
		Lecithins	322(i), (ii)	GMP	
		Grape skin extract	163(ii)	500 mg/kg	181
		Ammonium salts of phosphatidic acids	442	GMP	
		Sucrose esters of fatty acids	473	GMP	
		Polyglycerol polyricinoleate	476	GMP	
		L-Tartaric acid	334	3,000 mg/kg	
		Candelilla wax	902	GMP	
		[75][Sulfur dioxide	220	2,000 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Caramel III - ammonia caramel	150c	20,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	20,000 mg/kg	
		Carnauba wax	903	GMP	
		beta – Carotenes, vegetable	160a(ii)	500 mg/kg	
		Cyclodextrin, beta-	459	20,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	50,000 mg/kg	
		Erythrosine	127	25 mg/kg	
		Fast green FCF	143	200 mg/kg	
		Guaiac resin	314	1,500 mg/kg	
		HYDROXYBENZOATES, PARA-		1,500 mg/kg	
		RIBOFLAVINS		1,000 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	

		Lauric arginate ethyl ester	243	225 mg/kg	
		Microcrystalline wax	905c(i)	[69][20,000 mg/kg	3]
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		GMP	
		Neotame	961	1,000 mg/kg	
		PHOSPHATES		44,000 mg/kg	33
		POLYSORBATES		5,000 mg/kg	
		Polyethylene glycol	1521	20,000 mg/kg	
		Polyvinylpyrrolidone	1201	10,000 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		Sucroglycerides	474	20,000 mg/kg	
		Propylene glycol esters of fatty acids	477	20,000 mg/kg	
		Sodium aluminosilicate	554	100 mg/kg	
		Aluminium silicate	559	100 mg/kg	
		SACCHARINS		2,500 mg/kg	
		SORBATES		1,500 mg/kg	42
		Canthaxanthin	161g	GMP	
		Shellac, bleached	904	GMP	
		Stearoyl citrate	484	15,000 mg/kg	
		Steviol glycosides	960	3,500 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	5,000 mg/kg	
		Propyl gallate	310	1,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		TOCOPHEROLS		1,500 mg/kg	

		Tertiary butylhydroquinone (TBHQ)	319	400 mg/kg	130
		Mineral oil, high viscosity	905d	20,000 mg/kg	3
5.4	**Decorations (e.g. for fine bakery wares), toppings (non-fruit) and sweet sauces**	Acesulfame potassium	950	500 mg/kg	
		[75][Alitame	956	300 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Aspartame	951	1,000 mg/kg	
		BENZOATES		1,500 mg/kg	
		Beeswax	901	GMP	
		Brilliant blue FCF	133	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200mg/kg	130, 15
		Butylated hydroxytoluene (BHT)	321	200mg/kg	130, 15
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	
		Candelilla wax	902	GMP	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	50,000 mg/kg	
		Carnauba wax	903	GMP	
		beta-Carotenes, vegetable	160a(ii)	20,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Erythrosine	127	50 mg/kg	

		Fast green FCF	143	100 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Propyl gallate	310	1,000 mg/kg	
		SORBATES-		1,000 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPHATES		1,500 mg/kg	33
		POLYSORBATES		3,000 mg/kg	
		Ponceau 4R	124	50 mg/kg	
		Propylene glycol esters of fatty acids	477	40,000 mg/kg	
		RIBOFLAVINS		3,000 mg/kg	
		SACCHARINS		500 mg/kg	
		Shellac, bleached	904	GMP	
		Sucralose (Trichlorogalactosucrose)	955	1,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	
		Mineral oil, high viscosity	905d	2000 mg/kg	3
		52[Allura Red	129	100 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	181
		Mineral oil, medium viscosity	905e	2,000 mg/kg	XS 86, XS 105, 3, XS 141, XS 87
		Poly glycerol esters of fatty acid	475	2,000 mg/kg	368

		Polyglycerol esters of interesterified ricinoleic acid	476	5,000 mg/kg	
		Propylene glycol alginate	405	5,000 mg/kg	
		SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	
		STEAROYL LACTYLATES		2,000 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	348
		Sucrose oligoesters, Type I and Type II	473a	5,000 mg/kg	348
		Sucrose esters of fatty acids	473	5,000 mg/kg	348
		TARTRATES		8,000 mg/kg	45
		TOCOPHEROLS		500 mg/kg	15]

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
6.0	**Cereals and cereal products derived from cereal grains, from roots and tubers, pulses, legumes (fresh pulses and legumes are covered in category 4.2) and pith or soft core of palm tree, excluding bakery wares of food category 7.0: including unprocessed (6.1) and various processed forms of cereals and cereal based products**				
6.1	**Whole, broken, or flaked grain, including rice**	No additives permitted			
6.2	**Flours and starches (including soybean powder)**				
6.2.1 and 6.2.2	**Flours and starches***	Protease	1101(i)	GMP	
		Pullulan	1204	GMP	25
		SULFITES		200 mg/kg	44
		Benzoyl peroxide	928	75 mg/kg	

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Chlorine	925	2,500 mg/kg	87
		L-Ascorbic acid	300	300 mg/kg	
		Azodicarbonamide	927a	45 mg/kg	
		PHOSPHATES		2,500 mg/kg	225, 33
		Sodium ascorbate	301	300 mg/kg	
		SODIUM ALUMINIUM PHOSPHATES		1,600 mg/kg	6, 252
		alpha-Amylase from Aspergillus oryzae var.	1100 (i)	100 mg/kg	On flour mass basis
		alpha-Amylase from Bacillus subtilis	1100 (iii)	GMP	
		Carbohydrase from Bacillus licheniformis	1100 (vi)	GMP	
		Diacetyltartaric and fatty acid esters of glycerol	472e	3,000 mg/kg	186
		Lecithins	322(i), (ii)	GMP	28, 25
		Amylases and other enzymes	1100	GMP	
		Ammonium persulfate	923	2,500 mg/kg	On flour mass basis
		Calcium carbonate	170(i)	5,000 mg/kg	On flour mass basis
		[69][****]			
		Ammonium chloride	510	500 mg/kg	On flour mass basis
		L-cysteine mono hydrochloride	920	90 mg/kg	On flour mass basis
		Soduim bisulphite	222	GMP	
		Sodium metabisulfite	223	GMP	

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Trisodium citrate	331(iii)	GMP	
	Maida	Only following additives permitted in maida (if the flour is used for baking purpose)			
		Benzoyl peroxide	928	40 mg/kg	
		Ascorbic acid	300	200 mg/kg	
	Corn flour	Only following additives permitted in corn flour (Maize starch)			
		SULFITES		100 mg/kg	44
		*No additives permitted in Atta			
6.3	**Ready -to -eat cereals, breakfast cereals, including rolled oats**	**ASCORBYL ESTERS**		200 mg/kg	10
		Acesulfame potassium	950	1,200 mg/kg	188
		Allura red AC	129	100 mg/kg	-
		Aspartame	951	1,000 mg/kg	191
		Curcumin	100	GMP	
		Paprika oleoresin	160c(i)	GMP	
		Brilliant blue FCF	133	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	196, 15
		Butylated hydroxytoluene (BHT)	321	100 mg/kg	196, 15
		CAROTENOIDS		200 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	189
		Caramel IV - sulfite ammonia caramel	150d	2,500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	400 mg/kg	
		Grape skin extract	163(ii)	200 mg/kg	

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		IRON OXIDES		75 mg/kg	
		Neotame	961	160 mg/kg	
		Propyl gallate	310	200 mg/kg	196
		PHOSPHATES		2,200 mg/kg	33
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		100 mg/kg	
		Steviol glycosides	960	350 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	1,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		[52]**[TOCOPHEROLS**		**200 mg/kg]**	
6.4	**Pastas and noodles and like products**				
6.4.1	**Fresh pastas and noodles and like products**	Agar	406	GMP	211
		Alginic acid	400	GMP	211
		Aluminium ammonium sulphate	523	300 mg/kg	247,6
		Ascorbic acid	300	200 mg/kg	
		Calcium carbonate	170(i)	GMP	
		Carbon dioxide	290	GMP	211,59
		Carob bean gum	410	GMP	211
		Carrageenan	407	GMP	211
		Citric acid	330	GMP	
		Curdlan	424	GMP	211
		Distarch phosphate	1412	GMP	211
		Fumaric acid	297	700 mg/kg	
		Gellan gum	418	GMP	211

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Glucono delta-lactone	575	GMP	
		Glycerol	422	GMP	211
		Guargum	412	GMP	211
		Gumarabic	414	GMP	211
		Karaya gum	416	GMP	211
		Konjac flour	425	GMP	211
		Lactic acid L-, -D-and DL-	270	GMP	
		Lecithins	322(i), (ii)	GMP	
		Microcrystalline cellulose	460(i)	GMP	211
		Mono- and di-glycerides of fatty acids	471	GMP	
		Pectins	440	GMP	211
		Phosphated distarch phosphate	1413	GMP	211
		PHOSPHATES		2,500 mg/kg	211,33
		Potassium carbonate	501(i)	11,000 mg/kg	
		Processed eucheuma seaweed	407a	GMP	211
		Pullulan	1204	GMP	211
		Sodium acetate	262(i)	600 mg/kg	
		Sodium alginate	401	GMP	211
		Sodium ascorbate	301	GMP	
		Sodium carbonate	500 (i)	10,000 mg/kg	
		Carboxymethyl cellulose	466	GMP	
		Sodium DL-malate	350(ii)	GMP	
		Sodium hydrogen carbonate	500(ii)	GMP	

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Sodium lactate	325	GMP	
		Tragacanth gum	413	GMP	211
		Xanthan gum	415	GMP	211
6.4.2	**Dried pastas and noodles and like products**	Canthaxanthin	161g	15 mg/kg	211
		Caramel IV - Sulfite Ammonia caramel	150d	50,000 mg/kg	211
		Diacetyl tartaric acid and fatty acid esters of glycerol	472e	5,000 mg/kg	
		PHOSPHATES		900 mg/kg	211,33
		Agar	406	GMP	256
		Alginic acid	400	GMP	256
		Ammonium alginate	403	GMP	256
		Ascorbic acid, L-	300	GMP	256
		Calcium 5'-ribonucleotide	634	GMP	256
		Calcium alginate	404	GMP	256
		Calcium ascorbate	302	200 mg/kg	256
		Calcium carbonate	170(i)	GMP	256
		Calcium sulfate	516	GMP	256
		Carob bean gum	410	GMP	256
		beta – Carotenes , vegetable	160a (ii)	1,000 mg/kg	211
		Carrageenan	407	GMP	256
		Citric acid	330	GMP	256
		Disodium 5'-guanylate	627	GMP	256
		Disodium 5'-Inosinate	631	GMP	256
		Disodium 5'-ribonucleotide	635	GMP	256
		Distarch phosphate	1412	GMP	256

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Fumaric acid	297	GMP	256
		Gellan gum	418	GMP	256
		Guar gum	412	GMP	256
		Gum arabic	414	GMP	256
		Karaya gum	416	GMP	256
		Konjac flour	425	GMP	256
		Lactic acid L-, D- and DL-	270	GMP	256
		Lecithins	322 (i)	GMP	256
		Malic acid	296	GMP	256
		Mannitol	421	GMP	256
		Microcrystalline cellulose	460 (i)	GMP	256
		Mono- and di-glycerides of fatty acids	471	GMP	256
		Monosodium L-glutamate	621	GMP	256
		Nitrous oxide	942	GMP	256
		Pectins	440	GMP	256
		Phosphated distarch phosphate	1413	GMP	256
		POLYSORBATES		5,000 mg/kg	
		Potassium alginate	402	GMP	256
		Potassium carbonate	501 (i)	GMP	256
		Potassium chloride	508	GMP	256
		Processed eucheuma seaweed	407a	GMP	256
		Pullulan	1204	GMP	256

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Salts of myristic, palmitic and stearic acids with ammonia,calcium, potassium and sodium	470 (i)	GMP	256
		Sodium acetate	262 (i)	GMP	256
		Sodium alginate	401	GMP	256
		Sodium ascorbate	301	200 mg/kg	256
		Sodium carbonate	500 (i)	GMP	256
		Carboxymethyl cellulose	466	GMP	256
		Sodium gluconate	576	GMP	256
		Sodium hydrogen carbonate	500 (ii)	GMP	256
		Sodium lactate	325	GMP	256
		Tara gum	417	GMP	256
		Tragacanth gum	413	GMP	256
		Xanthan gum	415	GMP	256
6.4.3	**Pre-cooked pastas and noodles and like products**	**ASCORBYL ESTERS**		500 mg/kg	211, 10
		BENZOATES		1,000 mg/kg	13
		Butylated hydroxyanisole (BHA)	320	200mg/kg	130, 15
		Butylated hydroxytoluene (BHT)	321	200mg/kg	130, 15
		CAROTENOIDS		1,200 mg/kg	153
		CHLOROPHYLLS AND CHLOROPYLLINS, COPPER COMPLEXES		100 mg/kg	153
		Canthaxanthin	161g	15 mg/kg	153

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Caramel III - Ammonia carmel	150c	50,000 mg/kg	153,173
		Caramel IV- Sulfite ammonia carmel	150d	50,000 mg/kg	153
		beta – Carotenes , vegetable	160a(ii)	1,000 mg/kg	153
		Cyclodextrin, beta	459	1,000 mg/kg	153
		Diacetyl tartaric acid and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Fast green FCF	143	100 mg/kg	194
		PHOSPHATES		2,500 mg/kg	33,211
		POLYSORBATES		5,000 mg/kg	
		Polydimethylsiloxane	900a	50 mg/kg	153
		Propyl gallate	310	200 mg/kg	
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	153,2
		RIBOFLAVINS		300 mg/kg	153
		SORBATES		2,000 mg/kg	42,211
		SULFITES		20 mg/kg	44
		Sunset yellow FCF	110	100 mg/kg	153
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	130,15
		Paprika oleoresin	160c(i)	GMP	
		Annatto	160b(i),(ii)	GMP	
		Tartaric acid	334	GMP	

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
6.5	**Cereals/pulses and starch based desserts**	**ASCORBYL ESTERS**		500 mg/kg	10, 2
		Acesulfame potassium	950	350 mg/kg	188
		Allura red AC	129	100 mg/kg	
		Aspartame	951	200 mg/kg	191
		BENZOATES		1,000 mg/kg	13
		CAROTENOIDS		150 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		75 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	2,500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyl tartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES		315 mg/kg	21
		Grape skin extract	163(ii)	200 mg/kg	181
		IRON OXIDES		75 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		Neotame	961	33 mg/kg	
		Nisin	234	3 mg/kg	
		PHOSPHATES		7,000 mg/kg	33

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		POLYSORBATES		3,000 mg/kg	
		Propyl gallate	310	90 mg/kg	2, 15
		Propylene glycol esters of fatty acids	477	40,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		100 mg/kg	
		SORBATES		1,000 mg/kg	42
		Steviol glycosides	960	165 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	400 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		Tocopherol	307	GMP	
		TBHQ	319	200 mg/kg	
		[52][Sodium carboxymethyl cellulose (Cellulose gum), Sodium carboxymethyl cellulose, enzymatically hydrolysed (Cellulose gum, enzymatically hydrolyzed)]	466, 469	5 g/kg	
		Ponceau 4R	124	100 mg/kg	
		Carmoisine	122	100 mg/kg	
		Erythrosine	127	50 mg/kg	
		Tartrazine	102	100 mg/kg	
		Indogotine (Indigo carmine)	132	100 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Fast green FCF	[52][143]	100 mg/kg	
6.6	**Batters**	Butylated hydroxyanisole (BHA)	320	200 mg/kg	Only for vada dry mixes
		CAROTENOIDS		500 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	2,500 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyl tartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		PHOSPHATES		5,600 mg/kg	33
		POLYSORBATES		5,000 mg/kg	2
		Polydimethylsiloxane	900a	10 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SODIUM ALUMINIUM PHOSPHATES		1,000 mg/kg	6
		SORBATES		2,000 mg/kg	42
		Tartaric acid	334	[52][GMP]	
6.7	**Pre-cooked or processed cereal/grain/legume products**	Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV - sulfite ammonia caramel	150d	2,500 mg/kg	
		Sucralose (Trichlorogalactosucrose)	955	200 mg/kg	72

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
6.8	**Soybean products (excluding soybean-based seasonings and condiments of food category 12.9)**				
6.8.1	**Soybean based beverages**	Caramel III - ammonia caramel	150c	1,500 mg/kg	
		PHOSPHATES		1,300 mg/kg	33
		RIBOFLAVINS		50 mg/kg	
		Steviol glycosides	960	200 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	400 mg/kg	
6.8.2	**Soybean-based beverage film**				
6.8.3	**Soybean curd (tofu)**	**PHOSPHATES**		100 mg/kg	33
6.8.4	**Semi-dehydrated soybean curd**				
6.8.4.1	**Thick gravy-stewed semi-dehydrated soybean curd**				
6.8.4.2	**Deep fried semi-dehydrated soybean curd**				
6.8.4.3	**Semi- dehydrated soybean curd, other than food categories 6.8.4.1 and 6.8.4.2**				
6.8.5	**Dehydrated soybean curd**				
6.8.6	**Fermented soybeans**				

Table 6

Cereals and cereal products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
6.8.7	**Fermented soybean curd**				
6.8.8	**Other soybean protein products**	Caramel III Ammonia process	150c	20,000 mg/kg	
		Caramel IV - Sulfite ammonia Process	150d	20,000 mg/kg	

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
7.0	**Bakery products**	**ASCORBYL ESTERS**		1,000 mg/kg	15,10
		Benzoic acid	210	1,000 mg/kg	13
		Butylated hydroxyanisole (BHA)	320	200mg/kg	180, 15
		Butylated hydroxytoluene (BHT)	321	200mg/kg	180, 15
		Carnauba wax	903	GMP	3
		Fast green FCF	143	100 mg/kg	
		Mineral oil, high viscosity	905d	3,000 mg/kg	125
		Propylene glycol esters of fatty acids	477	15,000 mg/kg	72, 11
		SORBATES		1,000 mg/kg	42
7.1	**Bread and ordinary bakery wares and mixes**	Acesulfame potassium	950	1,000 mg/kg	188
		Aspartame	951	4,000 mg/kg	191
		Ammonium persulfate	923	2,500 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	6,000 mg/kg	
		Neotame	961	70 mg/kg	
		Sucralose (Trichlorogalactosucrose)	955	650 mg/kg	
		Tartaric acid	334	GMP	
		Sucrose esters of fatty acid	473	GMP	

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Sodium stearoyl-2-lactylate	481(i),	5,000 mg/kg	Singly or in combination
		Calcium stearoyl-2- lactyalate	482(ii)	5,000 mg/kg	
		Polyglycerol esters of interesterified ricinoleic acid	476	2,000 mg/kg	
		Acid calcium phosphate	341	10,000 mg/kg	
		Sodium diacetate	262 (ii)	4,000 mg/kg	
		Acid sodium pyrophosphate	450 (i)	5,000 mg/kg	
		L- Cysteine monohydrochloride	920	90 mg/kg	
		Curcumin	100	GMP	
		Benzoyl peroxide	928	80 mg/kg	
		Acid calcium phosphate	341	10,000 mg/kg	
7.1.1	**Bread and rolls including yeast leavened breads, specialty breads and soda breads**	Mineral oil, medium viscosity	905e	3,000 mg/kg	36, 126
		Xylanase		GMP	Only for breads, FS03
		POLYSORBATES		3,000 mg/kg	
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	195, 15
		PHOSPHATES		9,300 mg/kg	229,33
7.1.2	**Crackers**	Allura red AC	129	100 mg/kg	
		Aluminium ammonium sulfate	523	100 mg/kg	246, 6

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		CAROTENOIDS		1,000 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfite ammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Grape skin extract	163(ii)	200 mg/kg	181
		PHOSPHATES		9,300 mg/kg	229,33
		POLYSORBATES		5,000 mg/kg	11
		SODIUM ALUMINIUM PHOSPHATES		100 mg/kg	246, 6
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	15, 195
		[70][SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	11]
7.1.3	**Other ordinary bakery products**	Allura red AC	129	100 mg/kg	
		Aluminium ammonium sulfate	523	100 mg/kg	6, 244, 246
		CAROTENOIDS		100 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfite ammonia caramel	150d	50,000 mg/kg	
		PHOSPHATES		9,300 mg/kg	229,33
		POLYSORBATES		3,000 mg/kg	11

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Propyl gallate	310	100 mg/kg	15, 130
		SODIUM ALUMINIUM PHOSPHATES		100 mg/kg	6, 244, 246
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	15, 130
		[70][SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	11]
7.1.4	**Bread-type products, including bread stuffing and bread crumbs**	**CAROTENOIDS**		200 mg/kg	116
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		6 mg/kg	62
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Grape skin extract	163(ii)	200 mg/kg	181
		PHOSPHATES		9,300 mg/kg	[52][229,33]
		POLYSORBATES		3,000 mg/kg	11
		[52][Poly glycerol esters of fatty acid	475	10,000 mg/kg]	
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	15, 195
		[70][SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	11]

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
7.1.5	**Steamed breads and buns**	Aluminium ammonium sulfate	523	40 mg/kg	246, 6, 248
		CAROTENOIDS		100 mg/kg	216
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		PHOSPHATES		9,300 mg/kg	229,33
		POLYSORBATES		3,000 mg/kg	11
		Propylene glycol esters of fatty acids	477	15,000 mg/kg	11, 72
		SODIUM ALUMINIUM PHOSPHATES		40 mg/kg	246, 6, 248
		[70][SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	11]
7.1.6	**Mixes for bread and ordinary bakery wares**	Aluminium ammonium sulfate	523	40 mg/kg	246, 6, 249
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		PHOSPHATES		9,300 mg/kg	229,33
		POLYSORBATES		3,000 mg/kg	11
		SODIUM ALUMINIUM PHOSPHATES		40 mg/kg	248, 246, 6

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		[70][SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	11]
7.2	**Fine bakery wares (sweet, salty, savoury) and mixes**	[52]**[STEAROYL LACTYLATES**		5,000 mg/kg	
		SORBITAN ESTERS OF FATTY ACIDS		10,000 mg/kg	
		Nisin	234	6.25 mg/kg	233
		POLYOXYETHYLENE STEARATES		3,000 mg/kg	
		Propylene glycol	1520	1,500 mg/kg	
		Sucrose oligoesters, Type I and Type II	473a	10,000 mg/kg	348
		Ponceau 4R	124	50 mg/kg	
		Sunset yellow FCF	110	50 mg/kg]	
7.2.1	**Cakes, cookies, biscuit, cracker and pies**	Acesulfame potassium	950	1,000 mg/kg	165,188
		Allura red AC	129	100 mg/kg	
		Aspartame	951	1,700 mg/kg	191,165
		Aspartame-acesulfame salt	962	1,000 mg/kg	77, 113
		BENZOATES		1,000 mg/kg	13
		Beeswax	901	GMP	3
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND		75 mg/kg	

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		CHLOROPHYLLINS, COPPER COMPLEXES			
		Candelilla wax	902	GMP	3
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfite ammonia caramel	150d	1,200 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	20,000 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		IRON OXIDES		100 mg/kg	-
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Neotame	961	80 mg/kg	165
		PHOSPHATES		9,300 mg/kg	229,33
		[52][omit		]	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		170 mg/kg	165
		SULFITES		50 mg/kg	44
		Shellac, bleached	904	GMP	3
		Sucralose (Trichlorogalactosucrose)	955	700 mg/kg	165
		Sucroglycerides	474	10,000 mg/kg	
		[52][Omit		]	
		Sucrose esters of Fatty acids	473	GMP	
		Tartaric acid	334	GMP	
		Benzoyl peroxide	928	40 mg/kg	

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		Curcurmin	100(i)	GMP	
		Canthaxanthin	161g	GMP	
		Annatto	160(b)	GMP	
		Carmoisine	122	100 mg/kg	
		Erythrosine	127	50 mg/kg	
		POLYSORBATES		3,000 mg/kg	
		Tartarazine	102	100 mg/kg	
		[69][****]			
		[52][Poly glycerol esters of fatty acid	475	10,000 mg/kg	
		TOCOPHEROLS		200 mg/kg	389
		TARTRATES		5,000 mg/kg	45
		Propylene glycol alginates	405	3,000 mg/kg]	
7.2.2	**Other fine bakery products**	Acesulfame potassium	950	1,000 mg/kg	165,188
		Allura red AC	129	100 mg/kg	
		Aspartame	951	1,700 mg/kg	191,165
		Aspartame-acesulfame salt	962	1,000 mg/kg	77,113
		BENZOATES		1,000 mg/kg	13
		Beeswax	901	GMP	3
		Brilliant blue FCF	133	200 mg/kg	
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		75 mg/kg	
		Candelilla wax	902	GMP	3
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfite ammonia caramel	150d	1,200 mg/kg	

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		POLYSORBATES		3,000 mg/kg	
		[52][omit		]	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	20,000 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		IRON OXIDES		100 mg/kg	
		Indigotine (Indigo carmine)	132	200 mg/kg	
		Neotame	961	80 mg/kg	165
		PHOSPHATES		9,300 mg/kg	229, 33
		[52][Omit		]	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		170 mg/kg	165
		SULFITES		50 mg/kg	44
		Shellac, bleached	904	GMP	3
		Sucralose	955	700 mg/kg	165
		Sucroglycerides	474	10,000 mg/kg	
		[52][Poly glycerol esters of fatty acid	475	10,000 mg/kg]	
7.2.3	**Mixes for fine bakery wares**	Acesulfame potassium	950	1,000 mg/kg	165,188
		Allura red AC	129	100 mg/kg	
		Aspartame	951	1,700 mg/kg	191,165
		Aspartame-acesulfame salt	962	1,000 mg/kg	77,113
		Beeswax	901	GMP	3
		Brilliant blue FCF	133	200 mg/kg	
		CAROTENOIDS		100 mg/kg	

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		75 mg/kg	
		Candelilla wax	902	GMP	3
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfite ammonia caramel	150d	1,200 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	20,000 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		IRON OXIDES		100 mg/kg	
		Indigotine (Indigo carmine)	132	200 mg/kg	
		Neotame	961	80 mg/kg	165,
		PHOSPHATES		9,300 mg/kg	229,33
		[52][omit		]	
		Propyl gallate	310	200 mg/kg	196,15
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		170 mg/kg	165
		SULFITES		50 mg/kg	44
		Shellac, bleached	904	GMP	3
		Sucralose (Trichlorogalactosucrose)	955	700 mg/kg	165
		Sucroglycerides	474	10,000 mg/kg	
		POLYSORBATES		3,000 mg/kg	

Table 7

Bakery products					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended maximum level**	**Note**
		[52][Poly glycerol esters of fatty acid	475	15,000 mg/kg	11]

Table 8

Meat and meat products including poultry					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
8.0	**Fresh / frozen / chilled / ground meat, poultry (frozen mutton, chicken, goat and buffalomeat)**				
8.1	**Fresh / frozen / chilled / ground meat and poultry**	No additives permitted			
8.1.1	**Fresh / frozen / chilled meat, poultry, whole pieces or cuts**	No additives permitted			
8.1.2	**Fresh / frozen / chilled meat, poultry, comminuted**	No additives permitted			
8.2	**Processed meat and poultry products in whole pieces or cuts**	Paprika oleoresin	160c(i)	GMP	
		POLYSORBATES		5,000 mg/kg	XS97, XS96
		Propyl gallate	310	200 mg/kg	XS97, XS96, 130, 15
		Tertiary butylhydroquinone (TBHQ)	319	100 mg/kg	XS97, XS96,15, 167,130
		Brilliant Blue FCF	133	100 mg/kg	XS97, XS96, 4, XS98, XS89
		Butylated hydroxyanisole (BHA)	320	200mg/kg	15, 130, XS96, XS97

Table 8

Meat and meat products including poultry					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Butylated hydroxytoluene (BHT)	321	100mg/kg	15, 130, 167, XS96, XS97
		Caramel III - ammonia caramel	150c	GMP	XS97, XS96,XS98, XS89, 4, 3
		Caramel IV –sulfite ammonia caramel	150d	GMP	XS97, XS96,XS98, XS89, 4, 3
		beta-Carotenes, vegetable	160a(ii)	5,000 mg/kg	XS97, XS96,
		Erythrosine	127	30 mg/kg	XS97, XS96, 4
		Fast green FCF	143	100 mg/kg	XS97, XS96, 3, 4
		RIBOFLAVINS		300 mg/kg	XS96 XS97
		Sunset yellow FCF	110	100 mg/kg	XS 97, XS 96
8.2.1	**Non-heat treated processed meat and poultry products in whole pieces or cuts**	**PHOSPHATES**		2,200 mg/kg	33
		Grape skin extract	163(ii)	5,000 mg/kg	XS96, XS97
8.2.1.1	**Cured (including salted) non-heat treated processed meat and poultry products in whole pieces or cuts**				

Table 8

Meat and meat products including poultry					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
8.2.1.2	**Cured (including salted) and dried processed meat and poultry products in whole pieces or cuts**	**BENZOATES**		1,000 mg/kg	3, 13
		Isopropyl citrates	384	200 mg/kg	
		Natamycin (Pimaricin)	235	6 mg/kg	
8.2.1.3	**Fermented non-heated treated processed meat and poultry products in whole pieces or cuts**	Sucroglycerides	474	5,000 mg/kg	
		NITRITES		80 mg/kg	32,288
8.2.2	**Heat-treated processed meat and poultryproducts in whole pieces or cuts (canned chicken, canned mutton and goat meat)**	Added colour, flavour and meat tenderizer not permitted.			
		Nisin	234	25 mg/kg	330, XS97, XS96, 233
		NITRITES		80 mg/kg	32, 288
		PHOSPHATES		2,200 mg/kg	33
		SACCHARINS		500 mg/kg	XS97, XS96
		Sucroglycerides	474	5,000 mg/kg	XS97, XS96, 15
		[52][**TOCOPHEROLS**		500 mg/kg	XS 96, XS 97]
8.2.3	**Frozen processed meat and poultry products in whole pieces or cuts**	[52][Mineral oil, High Viscosity	905d	950 mg/kg	3
		PHOSPHATES		2,200 mg/kg	33]

Amendment for substitution of highlighted provision

[77][Frozen raw, flavoured/marinated, processed meat and poultry products in whole pieces or cuts.]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

Table 8

Meat and meat products including poultry					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
[52]**[8.3**	**Processed comminuted meat and poultry products**	Brilliant blue FCF	133	100 mg/kg	XS96, XS89, XS98, XS97, 4, 16
		Butylatedhydroxyanisole (BHA)	320	200mg/kg	XS89, XS98, 130, 15
		Butylatedhydroxytoluene (BHT)	321	100mg/kg	XS89, XS98, 15, 130, 162
		Caramel III - ammonia caramel	150c	GMP	XS89, XS98 XS96, XS97, 3, 4 ,16
		Caramel IV - sulfite ammonia caramel	150d	GMP	XS89, XS98, XS96, XS97, 3, 4,16
		Erythrosine	127	30 mg/kg	4, 290
		Grape skin extract	163(ii)	5,000 mg/kg	XS89, XS98,16
		NITRITES		80 mg/kg	286, 32
		Paprika oleoresin	160c(i)	GMP	
		PHOSPHATES		2,200 mg/kg	33, 302
		POLYSORBATES		5,000 mg/kg	XS89, XS98
		RIBOFLAVINS		1,000 mg/kg	XS96, XS97, 16
		Propyl gallate	310	200 mg/kg	XS89, XS98, 15, 130
		Propylene glycol alginate	405	3,000 mg/kg	XS89, XS98
		SORBATES		1,500 mg/kg	XS89, XS98, 42
		Sodium diacetate	262(ii)	1,000 mg/kg	XS89, XS98
		TOCOPHEROLS		500 mg/kg	XS 89, XS 98

Table 8

Meat and meat products including poultry					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Tertiary butylhydroquinone (TBHQ)	319	100 mg/kg	XS 89, XS 98, 15, 130, 162]
8.3.1	**Non-heat treated processed comminuted meat and poultry products**	beta-Carotenes, vegetable	160a(ii)	20 mg/kg	118
8.3.1.1	**Cured (including salted) non-heat treated processed comminuted meat and poultry products**	Canthaxanthin	161g	100 mg/kg	118,4
8.3.1.2	**Cured (including salted) and dried processed comminuted meat and poultry products**	Isopropyl citrate	384	200 mg/kg	
		Natamycin (Pimaricin)	235	20 mg/kg	3, 81
		BENZOATES		1,000 mg/kg	3,13
		Sunset yellow FCF	110	100 mg/kg	
8.3.1.3	**Fermented non-heat treated processed comminuted meat and poultryproducts**	Sulphur dioxide	220	450 mg/kg	Sausages & sausage meat containing cereals and condiments
8.3.2		Sucroglycerides	474	5,000 mg/kg	

Table 8

Meat and meat products including poultry					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	Heat-treated processed comminuted meat and poultry products (canned cooked ham, canned luncheon meat, canned chopped meat)	Brilliant blue FCF	133	200 mg/kg	XS98, XS89, XS97, XS96, 4
		CAROTENOIDS		20 mg/kg	XS98, XS 89
		beta-Carotenes, vegetable	[52][160a(ii)]	20 mg/kg	XS89, XS98
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		35 mg/kg	XS89, XS98, 21
		Sucroglycerides	474	5,000 mg/kg	XS89, , XS98, 15
		Sunset yellow FCF	110	200 mg/kg	XS89, XS98,
		[52]**[TOCOPHEROLS**		500 mg/kg	XS 89 , XS 98]
8.3.3	**Frozen processed comminuted meat and poultry products**	Mineral oil, high viscosity	905d	950 mg/kg	3
		Brilliant blue FCF	133	200 mg/kg	100 mg/kg in other than cooked. XS89, XS98 XS97, XS96, 4
		Sunset yellow FCF	110	200 mg/kg	100 mg/kg in other than cooked. XS89, XS98
8.4	**Edible casings**	Paprika oleoresin	160c(i)	GMP	

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Table 8

Meat and meat products including poultry					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		ASCORBYL ESTERS		5,000 mg/kg	10
		Brilliant blue FCF	133	100 mg/kg	XS98, XS89, XS97, XS96, 4
		CAROTENOIDS		100 mg/kg	XS98, XS 89
		Fast green FCF	143	100 mg/kg	3
		Grape skin extract	163 (ii)	5,000 mg/kg	
		HYDROXYBENZ OATES, PARA-		36 mg/kg	27
		IRON OXIDES		1,000 mg/kg	72
		PHOSPHATES		1,100 mg/kg	33
		POLYSORBATES		1,500 mg/kg	XS97, XS96

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
9.0	**Fish and fish products, including molluscs, crustaceans, and echinoderms**				
9.1	**Fresh fish and fish products, including molluscs, crustaceans, and echinoderms**	No additives permitted			
9.1.1	**Fresh fish**	No additives permitted			
9.1.2	**Fresh molluscs, crustaceans, and echinoderms**	**SULFITES**		100mg/kg	~~44~~
9.2	**Processed fish and fish products, including molluscs, crustaceans, and echinoderms**	Acesulfame potassium	950	200 mg/kg	144 , 188
		Aspartame	951	300 mg/kg	144 , 191
		CAROTENOIDS		100 mg/kg	95
		Caramel III - ammonia caramel	150c	30,000 mg/kg	
		Caramel IV – sulfite ammonia caramel	150d	30,000 mg/kg	95
9.2.1	**Frozen fish, fish fillets, and fish products, including molluscs, crustaceans, and echinoderms(fro**	**ASCORBYL ESTERS**		1,000 mg/kg	10
		Ascorbic acid	300	GMP	

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	zen shrimps or prawns, frozen lobsters,frozen squid , frozen fin fish and frozen fish fillets)	Butylated hydroxyanisole (BHA)	320	200mg/kg	15, 180
		Butylated hydroxytoluene (BHT)	321	200mg/kg	15, 180
		Calcium carbonate	170(i)	GMP	95
		Canthaxanthin	161g	35 mg/kg	95
		Citric acid	330	GMP	61 , 257
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		75 mg/kg	21
		PHOSPHATES		2,200 mg/kg	33
		RIBOFLAVINS		300 mg/kg	95
		SULFITES		100 mg/kg	44 ,139
		Sodium dihydrogen citrate	331(i)	GMP	61
		Tripotassium citrate	332(ii)	GMP	61
		Acetylated distarch phosphate	1414	GMP	29
		Agar	406	GMP	3, 53, 29
		Alginic acid	400	GMP	29
		Ammonium alginate	403	GMP	29
		Calcium alginate	404	GMP	29
		Carob bean gum	410	GMP	37
		Carrageenan	407	GMP	37

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Citric and fatty acid esters of glycerol	472c	GMP	29
		Dextrins, roasted starch	1400	GMP	3, 53, 29
		Gellan gum	418	GMP	29
		Guar gum	412	GMP	37, 73
		Gum arabic (acacia gum)	414	GMP	29
		Hydroxypropyl cellulose	463	GMP	29
		Hydroxypropyl methyl cellulose	464	GMP	29
		Hydroxypropyl starch	1440	GMP	29
		Acetic and fatty acid esters of glycero	472a	GMP	29
		Karaya gum	416	GMP	29
		Lactic and fatty acid esters of glycerol	472b	GMP	29
		Lecithins	322(i), (ii)	GMP	29
		Magnesium chloride	511	GMP	29
		Mannitol	421	GMP	29
		Methyl cellulose	461	GMP	37
		Methyl ethyl cellulose	465	GMP	29
		Oxidized starch	1404	GMP	29
		Pectins	440	GMP	16,37
		Polydextroses	1200	GMP	29
		Potassium alginate	402	GMP	29
		Potassium chloride	508	GMP	29

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Potassium dihydrogen citrate	332(i)	GMP	61
		Powdered cellulose	460(ii)	GMP	29
		Processed eucheumaseaweed	407a	GMP	37
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	71, 29
		Trisodium citrate	331(iii)	GMP	61
		Salts of oleic acid with calcium, potassium and sodium	470(ii)	GMP	29
		Sodium alginate	401	GMP	37
		Carboxymethyl cellulose	466	GMP	
		Tara gum	417	GMP	29, 73
		Tragacanth gum	413	GMP	29
		Tricalcium citrate	333(iii)	GMP	29
		Trisodium citrate	331(iii)	GMP	61
		Xanthan gum	415	GMP	37
9.2.2	**Frozen battered fish, fish fillets and fish products, including molluscs,**	Trisodium citrate	331(iii)	GMP	61
		ASCORBYL ESTERS		1,000 mg/kg	10
		Ammonium carbonate	503(i)	GMP	41
		Ascorbic acid, L-	300	GMP	

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	crustaceans, and echinoderms	Butylated hydroxyanisole (BHA)	320	200mg/kg	15, 180
		Butylated hydroxytoluene (BHT)	321	200mg/kg	15, 180
		Citric acid	330	GMP	61
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		75 mg/kg	21
		Fumaric acid	297	GMP	41
		Malic acid, DL-	296	GMP	41
		PHOSPHATES		2,200 mg/kg	33
		Potassium carbonate	501(i)	GMP	41
		Potassium dihydrogen citrate	332(i)	GMP	61
		Potassium hydrogen carbonate	501(ii)	GMP	41
		Sodium carbonate	500(i)	GMP	41
		Sodium dihydrogen citrate	331(i)	GMP	61
		Sodium fumarates	365	GMP	41
		Sodium hydrogen carbonate	500(ii)	GMP	41
		Sodium sesquicarbonate	500(iii)	GMP	41

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		THIODIPROPIONATES		200 mg/kg	15, 46
		Acetylated distarch phosphate	1414	GMP	63
		Agar	406	GMP	29
		Carob bean gum	410	GMP	177
		Carrageenan	407	GMP	177
		Citric and fatty acid esters of glycerol	472c	GMP	129
		Dextrins, roasted starch	1400	GMP	29
		Gellan gum	418	GMP	29
		Guar gum	412	GMP	177
		Gum arabic (acacia gum)	414	GMP	29
		Hydroxypropyl cellulose	463	GMP	63
		Hydroxypropyl methyl cellulose	464	GMP	63
		Hydroxypropyl starch	1440	GMP	63
		Acetic and fatty acid esters of glycero	472a	GMP	29
		Karaya gum	416	GMP	29
		Lactic and fatty acid esters of glycerol	472b	GMP	29
		Magnesium chloride	511	GMP	29
		Mannitol	421	GMP	29
		Methyl cellulose	461	GMP	177
		Methyl ethyl cellulose	465	GMP	63
		Oxidized starch	1404	GMP	63

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Pectins	440	GMP	177
		Powdered cellulose	460(ii)	GMP	29
		Processed eucheumaseaweed	407a	GMP	177
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	71
		Salts of oleic acid with calcium, potassium and sodium	470(ii)	GMP	29
		Sodium alginate	401	GMP	210
		Carboxymethyl cellulose	466	GMP	177
		Tara gum	417	GMP	29, 73
		Tragacanth gum	413	GMP	29
		Xanthan gum	415	GMP	177
		Acetylated distarch adipate	1422	GMP	63
		Acid-treated starch	1401	GMP	63
		Alkaline treated starch	1402	GMP	63
		Hydroxypropyl distarch phosphate	1442	GMP	63
		Lecithins	322(i), (ii)	GMP	63
		Starch acetate	1420	GMP	63

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Monostarch phosphate	1410	GMP	63
		Tripotassium citrate	332(ii)	GMP	61
		Phosphated distarch phosphate	1413	GMP	63
9.2.3	**Frozen minced and creamed fish products including molluscs, crustaceans, and echinoderms**	**CHLOROPHYLLS, AND CHLOROPHYLLIN COPPER COMPLEXES**		40 mg/kg	95
		Grape skin extract	163(ii)	GMP	95
		PHOSPHATES		2,200 mg/kg	33
		Ponceau 4R	124	100 mg/kg	95
		Sunset yellow FCF	110	100 mg/kg	95
		Agar	406	GMP	
		Carob bean gum	410	GMP	
		Carrageenan	407	GMP	
		Dextrins, roasted starch	1400	GMP	
		Gellan gum	418	GMP	
		Guar gum	412	GMP	
		Karaya gum	416	GMP	
		Mannitol	421	GMP	
		Processed eucheumaseaweed	407a	GMP	
		Sodium alginate	401	GMP	
		Tripotassium citrate	332(ii)	GMP	
		Trisodium citrate	331(iii)	GMP	
		Tara gum	417	GMP	
		Xanthan gum	415	GMP	

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
9.2.4	**Cooked and/or fried fish and fish products, including molluscs, crustaceans, and echinoderms**	Ascorbic acid, L-	300	GMP	
		Calcium carbonate	170(i)	GMP	
		Fumaric acid	297	GMP	
		Magnesium carbonate	504(i)	GMP	
		Magnesium hydroxide	528	GMP	
		Magnesium hydroxide carbonate	504(ii)	GMP	
		Malic acid, DL-	296	GMP	
		Potassium dihydrogen citrate	332(i)	GMP	
		Sodium dihydrogen citrate	331(i)	GMP	
		Sodium fumarates	365	GMP	
		Tricalcium citrate	333(iii)	GMP	
		Tripotassium citrate	332(ii)	GMP	
		Trisodium citrate	331(iii)	GMP	
9.2.4.1	**Cooked fish and fish products**	Acetylated distarch phosphate	1414	GMP	241
		Allura red AC	129	100 mg/kg	95
		Carob bean gum	410	GMP	241
		Brilliant blue FCF	133	200 mg/kg	95
		Dextrins, roasted starch	1400	GMP	241
		Hydroxypropyl starch	1440	GMP	241
		Gellan gum	418	GMP	241

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Karaya gum	416	GMP	241
		CHLOROPHYLLS, AND CHLOROPHYLLIN COPPER COMPLEXES		30 mg/kg	62 ,95
		Calcium carbonate	170(i)	GMP	
		Oxidized starch	1404	GMP	241
		Processed eucheuma seaweed	407a	GMP	241
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	95
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		50 mg/kg	21
		Fast green FCF	143	200 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	95
		Indigotine (Indigo carmine)	132	200 mg/kg	95
		PHOSPHATES		2,200 mg/kg	33
		Ponceau 4R	124	200 mg/kg	95
		RIBOFLAVINS		300 mg/kg	95
		Tragacanth gum	413	GMP	241
		SACCHARINS		500 mg/kg	
		SORBATES		2,000 mg/kg	42
		Sodium fumarate	365	GMP	
		Sunset yellow FCF	110	200 mg/kg	95
		Xanthan gum	415	GMP	241, 327
9.2.4.2		Allura red AC	129	100 mg/kg	

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	Cooked molluscs, crustaceans, and echinoderms	Aluminium ammonium sulfate	523	200 mg/kg	6,250
		BENZOATES		2,000 mg/kg	13, 82
		Brilliant blue FCF	133	200 mg/kg	95
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Grape skin extract	163(ii)	1,000 mg/kg	
		PHOSPHATES		2,200 mg/kg	
		Ponceau 4R	124	200 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SORBATES		2,000 mg/kg	42, 82
		SULFITES		150 mg/kg	44
		Sunset yellow FCF	110	200 mg/kg	
9.2.4.3	**Fried fish and fish products, including molluscs, crustaceans, and echinoderms**	Hydroxypropyl starch	1440	GMP	41
		Processed eucheuma seaweed	407a	GMP	41
		Acetylated distarch phosphate	1414	GMP	41
		Carob bean gum	410	GMP	41
		Dextrins, roasted starch	1400	GMP	41
		Gellan gum	418	GMP	41
		CHLOROPHYLLS AND CHLOROPHYLLIN COPPER COMPLEXES		40 mg/kg	95,41
		Karaya gum	416	GMP	41

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Oxidized starch	1404	GMP	41
		Grape skin extract	163(ii)	1,000 mg/kg	95
		Tragacanth gum	413	GMP	41
		Xanthan gum	415	GMP	
9.2.5	**Smoked, dried, fermented, and/or salted fish and fish products, including molluscs, crustaceans, and echinoderms (Dried shark fins, Salted fish/ dried salted fish)**	Allura red AC	129	100 mg/kg	22
		BENZOATES		200 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	15, 196
		Butylated hydroxytoluene (BHT)	321	200 mg/kg	15, 196
		CHLOROPHYLLS AND CHLOROPHYLLINCOPPER COMPLEXES		200 mg/kg	
		Calcium carbonate	170(i)	GMP	266, 267
		Canthaxanthin	161g	15 mg/kg	
		beta- Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Fumaric acid	297	GMP	
		Grape skin extract	163(ii)	1,000 mg/kg	266, 267
		IRON OXIDES		250 mg/kg	22
		Magnesium carbonate	504(i)	GMP	22
		Indigotine (Indigo carmine)	132	100 mg/kg	22
		Magnesium hydroxide	528	GMP	266, 267

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Magnesium hydroxide carbonate	504(ii)	GMP	266, 267
		Malic acid, DL-	296	GMP	266, 267
		Ponceau 4R	124	100 mg/kg	266, 267
		Potassium dihydrogen citrate	332(i)	GMP	22
		Propyl gallate	310	100 mg/kg	266, 267
		RIBOFLAVINS		300 mg/kg	15, 196
		SORBATES		[52][1000 mg/Kg]	42
		SULFITES		30 mg/kg	
		Sodium dihydrogen citrate	331(i)	GMP	44
		Sodium fumarate	365	GMP	266, 267
		Sunset yellow FCF	110	100 mg/kg	266, 267
		Acetylated distarch phosphate	1414	GMP	22
		Agar	406	GMP	300
		Carrageenan	407	GMP	300
		Citric and fatty acid esters of glycerol	472c	GMP	300
		Guar gum	412	GMP	300
		Gum arabic (acacia gum)	414	GMP	300
		Hydroxypropyl cellulose	463	GMP	300
		Hydroxypropyl methyl cellulose	464	GMP	300
		Hydroxypropyl starch	1440	GMP	300

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Lactic and fatty acid esters of glycerol	472b	GMP	300
		Magnesium chloride	511	GMP	300
		Mannitol	421	GMP	300
		Methyl cellulose	461	GMP	300
		Methyl ethyl cellulose	465	GMP	300
		Oxidized starch	1404	GMP	300
		Pectins	440	GMP	300
		Powdered cellulose	460(ii)	GMP	300
		Processed eucheuma seaweed	407a	GMP	300
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	300
		Salts of oleic acid with calcium, potassium and sodium	470(ii)	GMP	300
		Sodium alginate	401	GMP	300
		Carboxymethyl cellulose	466	GMP	300
		Tara gum	417	GMP	300
		Tragacanth gum	413	GMP	300
		Xanthan gum	415	GMP	300
		Lecithins	322(i), (ii)	GMP	300

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Acetic and fatty acid esters of glycerol	472a	GMP	300
9. 3	**Semi preserved fish and fish products including molluscs, crustaceans, and echinoderms**	Acesulfame potassium	950	200 mg/kg	144, 188
		Aspartame	951	300 mg/kg	144, 191
		Aspartame-acesulfame salt	962	200 mg/kg	113
		BENZOATES		2,000 mg/kg	13, 120
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	15, 180
		Butylated hydroxytoluene (BHT)	321	200 mg/kg	15, 180
		CAROTENOIDS		100 mg/kg	100, 95
		Caramel III - ammonia caramel	150c	30,000 mg/kg	95
		Sucralose (Trichlorogalactosucrose)	955	120 mg/kg	144
		Caramel IV – sulfite ammonia caramel	150d	30,000 mg/kg	95
		Neotame	961	10 mg/kg	
		HYDROXYBENZOATES, PARA-		1,000 mg/kg	27
		SORBATES		1,000 mg/kg	42
9.3.1	**Fish and fish products including molluscs, crustaceans, and**	**PHOSPHATES**		2,200 mg/kg	33
		SACCHARINS		160 mg/kg	144

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	echinoderms, marinated and/or in jelly				
9.3.2	**Fish and fish products including molluscs, crustaceans and echinoderms, pickled and/or in brine**	**ETHYLENE DIAMINE TETRA ACETATES (EDTA)**		250 mg/kg	21
		PHOSPHATES		2,200 mg/kg	33
		SACCHARINS		160 mg/kg	144
9.3.3	**Salmon substitutes, caviar and other fish roe products**	Allura red AC	129	100 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINCOPPER COMPLEXES		200 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	1,500 mg/kg	
		IRON OXIDES		100 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		Ponceau 4R	[52][124]	200 mg/kg	
		RIBOFLAVINS		300 mg/kg	
9.3.4	**Semi-preserved fish and fish products including molluscs, crustaceans and**	Sunset yellow FCF	110	100 mg/kg	
		Allura red AC	129	100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHY		75 mg/kg	95

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	echinoderms (e.g. fish paste), excluding products of food categories 9.3.1 – 9.3.3	**LLIN COPPER COMPLEXES**			
		IRON OXIDES		50 mg/kg	95
		Indigotine (Indigo carmine)	132	100 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		Ponceau 4R	124	100 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		160 mg/kg	144
9.4	**Fully preserved including canned or fermented fish and fish products, and molluscs, crustaceans, and echinoderms(canned fin fish, canned shrimp, canned sardines, canned salmon, canned crab meat, canned tuna and bonito)**	Acesulfame potassium	950	200 mg/kg	144, 188
		Aspartame	951	300 mg/kg	144, 191
		Aspartame-acesulfame salt	962	200 mg/kg	113
		CAROTENOIDS		100 mg/kg	95
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	15, 180
		Butylated hydroxytoluene (BHT)	321	200 mg/kg	15, 180
		CHLOROPHYLLS AND CHLOROPHYLLIN COPPER COMPLEXES,		500 mg/kg	95
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	30,000 mg/kg	50
		Caramel IV – sulfite ammonia caramel	150d	30,000 mg/kg	95

Table 9

Fish and fish products, including molluscs, crustaceans, and echinoderms					
Food Category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		beta-Carotenes, vegetable	160a(ii)	500 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		340 mg/kg	21
		IRON OXIDE		50 mg/kg	95
		Neotame	961	10 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		RIBOFLAVINS		500 mg/kg	95
		SACCHARINS		200 mg/kg	144
		SULFITES		150 mg/kg	44, 140
		Sucralose (Trichlorogalacto sucrose)	955	120 mg/kg	144
		Carboxy methyl cellulose	466	GMP	

Table 10

Eggs and eggs products					
Food category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
10.0	**Eggs and egg products**				
10.1	**Fresh egg**	No additives permitted			
10.2	**Egg products**	Lauric arginate ethyl ester	243	200 mg/kg	
10.2.1	**Liquid egg products**	**BENZOATES**		5,000 mg/kg	13
		PHOSPHATES		4,400 mg/kg	67, 33
		SORBATES		5,000 mg/kg	42
		Triethyl citrate	1505	2,500 mg/kg	
		Acetic acid, glacial	260	GMP	
		Citric acid	330	GMP	
		Lactic acid L-, D- and DL-	270	GMP	
		Sodium acetate	262(i)	GMP	
		Sodium dihydrogen citrate	331(i)	GMP	
		Sodium lactate	325	GMP	
		Trisodium citrate	331(iii)	GMP	
		Agar	406	GMP	
		Calcium alginate	404	GMP	
		Carob bean gum	410	GMP	
		Carrageenan	407	GMP	
		Gellan gum	418	GMP	
		Guar gum	412	GMP	
		Gum arabic(Acacia gum)	414	GMP	
		Karaya gum	416	GMP	
		Konjac flour	425	GMP	
		Lecithins	322(i), (ii)	GMP	

Table 10

Eggs and eggs products					
Food category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
		Micro crystalline cellulose (cellulose gel)	460(i)	GMP	
		Pectins	440	GMP	
		Polydextroses	1200	GMP	
		Processed eucheuma seaweed	407a	GMP	
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	
		Sodium alginate	401	GMP	
		Tara gum	417	GMP	
		[52][omit			]
		Xanthan gum	415	GMP	
		Carboxymethyl cellulose	466	GMP	
10.2.2	**Frozen egg products**	**PHOSPHATES**		1,290 mg/kg	67, 33
		SORBATES		1,000 mg/kg	42
		Acetic acid, glacial	260	GMP	
		Citric acid	330	GMP	
		Lactic acid L-, D- and DL	270	GMP	
		Sodium acetate	262(i)	GMP	
		Sodium dihydrogen citrate	331(i)	GMP	
		Sodium lactate	325	GMP	
		Trisodium citrate	331(iii)	GMP	
		Agar	406	GMP	
		Calcium alginate	404	GMP	
		Carob bean gum	410	GMP	
		Carrageenan	407	GMP	

Table 10

Eggs and eggs products					
Food category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
		Gellan gum	418	GMP	
		Guar gum	412	GMP	
		Gum arabic(Acacia gum)	414	GMP	
		Karaya gum	416	GMP	
		Konjac flour	425	GMP	
		Lecithins	322(i), (ii)	GMP	
		Micro crystalline cellulose (cellulose gel)	460(i)	GMP	
		Mannitol	421	GMP	
		Mono- and di-glycerides of fatty acids	471	GMP	
		Pectins	440	GMP	
		Polydextrose	1200	GMP	
		Processed eucheuma seaweed	407a	GMP	
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	
		Sodium alginate	401	GMP	
		Tara gum	417	GMP	
		Carboxymethyl cellulose	466	GMP	
		Xanthan gum	415	GMP	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		200 mg/kg	21, 47
		[52]**[**omit			]
		Triethyl citrate	1505	2,500 mg/kg	47

Table 10

Eggs and eggs products					
Food category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
10.2.3	**Dried and/or heat coagulated egg products**	Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		200 mg/kg	21, 47
		SORBATES		1,000 mg/kg	42
		Triethyl citrate	1505	2,500 mg/kg	47
10.3	**Preserved eggs**	**PHOSPHATES**		1,000 mg/kg	33
10.4	**Egg based deserts e.g. custard**	Acesulfame potassium	950	350 mg/kg	188
		ASCORBYL ESTERS		500 mg/kg	10, 2
		Aspartame	951	1,000 mg/kg	191
		BENZOATES		1,000 mg/kg	13
		Lauric arginate ethyl ester	243	200 mg/kg	
		Neotame	961	100 mg/kg	
		PHOSPHATES		1,400 mg/kg	33
		POLYSORBATES		3,000 mg/kg	
		Propyl gallate	310	90 mg/kg	15, 2
		Propylene glycol esters of fatty acids	477	40,000 mg/kg	
		SACCHARINS		100 mg/kg	144
		SORBATES		1,000 mg/kg	42
		Steviol glycosides	960	330 mg/kg	26
		Sucralose (trichlorogalactosucrose)	955	400 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		Allura red AC	129	100 mg/kg	
		Brilliant Blue FCF	133	100 mg/kg	

Table 10

Eggs and eggs products					
Food category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
		CAROTENOIDS		150 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		300 mg/kg	
		Canthaxanthin	161g	15 mg/kg	
		Caramel IV- Sulfite ammonia Caramel	150d	20,000 mg/kg	
		Caramel III – ammonia caramel	[52][150c]	20,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Sunset yellow FCF	110	50 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Ponceau 4R	124	50 mg/kg	
		RIBOFLAVINS		200 mg/kg	

Table 11

Sweeteners including honey					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
11.0	**Sweeteners including honey**				
11.1	**Refined and raw sugars**	No additives permitted			
11.1.1	**White sugar, dextrose anhydrous, dextrose monohydrate, fructose (dextrose)**	**SULFITES**		15 mg/kg	44
	Refined Sugar	**SULFITES**		20 mg/kg	
11.1.2	**Powdered sugar, powdered dextrose (icing sugar)**	Calcium silicate	552	15,000 mg/kg	56
		Magnesium carbonate	504(i)	15,000 mg/kg	56
		carbonates of calcium	170(i)	15,000 mg/kg	
		Magnesium silicate, synthetic	553(i)	15,000 mg/kg	56
		Silicates of aluminium or sodium (aluminium silicate, sodium alluminosilicate, calcium aluminium silicate)	559, 554, 556	15,000 mg/kg	
		PHOSPHATES		6,600 mg/kg	56,33
		SULFITES		20 mg/kg	44
		Silicon dioxide, amorphous	551	15,000 mg/kg	56
11.1.3	**Soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar, khandsarisugar**	**SULFITES**		150 mg/kg	44, 111

Table 11

Sweeteners including honey					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
	(sulphur sugar), bura sugar				
	Khandsari sugar (desi)	No additives permitted			
11.1.3.1	**Dried glucose syrup for manufacture of sugar confectionery (dried glucose syrup)**	**SULFITES**		20 mg/kg	111,44
11.1.3.2	**Glucose syrup for manufacture of sugar confectionery (golden syrup)**	**SULFITES**		20 mg/kg	111,44
11.1.4	**Lactose**	No additives permitted			
11.1.5	**Plantation or mill white sugar (plantation white sugar, cube sugar, misri)**	**SULFITES**		70 mg/kg	44
[52]**[11.1.6**	**Gur or Jaggery**	Sulfites		50 mg/Kg	Residue not to exceed 50mg/Kg in the end product]
[52]**[11.1.6.1**	**Cane Jaggery/Gur**				
11.1.6.2	**Palm Jaggery/Gur**				
11.1.6.3	**Date Jaggery/Gur]**				
11.2	**Brown sugar excluding**	**SULFITES**		40 mg/kg	44

Table 11

Sweeteners including honey					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
	products of food category 11.1.3				
11.3	**Sugar solutions and syrups, also (partially) inverted, including treacle and molasses, excluding products of food category 11.1.3**	**RIBOFLAVINS**		300 mg/Kg	
		SULFITES		70 mg/kg	44
11.4	**Other sugars and syrups (e.g. xylose, maple syrup, sugar toppings)**	**ASCORBYL ESTERS**		200 mg/kg	10
		Acesulfame potassium	950	1,000 mg/kg	159, 188
		Acetic and fatty acid esters of glycerol	472a	GMP	258
		Acetylated distarch adipate	1422	GMP	258
		Acetylated distarch phosphate	1414	GMP	258
		Acid-treated starch	1401	GMP	258
		Agar	406	GMP	258
		Alginic acid	400	GMP	258
		[75][Alitame	956	200 mg/kg	159]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Alkaline treated starch	1402	GMP	258
		Allura red AC	129	200 mg/kg	
		Ammonium alginate	403	GMP	258
		Aspartame	951	3,000 mg/kg	159, 191
		BENZOATES		1,000 mg/kg	13
		Bleached starch		GMP	258
		CAROTENOIDS		50 mg/kg	217
		CHLOROPHYLLS AND CHLOROPHYLLI		64 mg/kg	62

Table 11

Sweeteners including honey					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
		NS, COPPER COMPLEXES			
		Calcium acetate	263	GMP	258
		Calcium alginate	404	GMP	259
		Canthaxanthin	161g	15 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	100
		Carob bean gum	410	GMP	258
		beta-Carotenes, vegetable	160a(ii)	50 mg/kg	
		Carrageenan	407	GMP	258
		Citric and fatty acid esters of glycerol	472c	GMP	258
		Distarch phosphate	1412	GMP	258
		Gellan gum	418	GMP	258
		Guar gum	412	GMP	258
		Gum arabic (Acacia gum)	414	GMP	258
		HYDROXYBENZOATES, PARA-		100 mg/kg	27
		Hydroxypropyl cellulose	463	GMP	258
		Hydroxypropyl distarch phosphate	1442	GMP	258
		Hydroxypropyl methyl cellulose	464	GMP	258
		Hydroxypropyl starch	1440	GMP	258
		Indigotine (Indigo carmine)	132	300 mg/kg	
		Karaya gum	416	GMP	258
		Konjac flour	425	GMP	258
		Lactic and fatty acid esters of glycerol	472b	GMP	258
		Lecithins	322(i), (ii)	GMP	258
		Magnesium carbonate	504(i)	GMP	258

Table 11

Sweeteners including honey					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
		Magnesium chloride	511	GMP	258
		Magnesium hydroxide	528	GMP	258
		Magnesium hydroxide carbonate	504(ii)	GMP	258
		Mannitol	421	GMP	258
		Methyl cellulose	461	GMP	258
		Methyl ethyl cellulose	465	GMP	258
		Microcrystalline cellulose (cellulose gel)	460(i)	GMP	258
		Mono- and di-glycerides of fatty acids	471	GMP	258
		Monostarch phosphate	1410	GMP	258
		Neotame	961	70 mg/kg	159
		Oxidized starch	1404	GMP	258
		PHOSPHATES		1,320 mg/kg	56,33
		Pectins	440	GMP	258
		Phosphated distarch phosphate	1413	GMP	258
		Polydextrose	1200	GMP	258
		Ponceau 4R	124	300 mg/kg	159
		Potassium alginate	402	GMP	258
		Potassium dihydrogen citrate	332(i)	GMP	
		Powdered cellulose	460(ii)	GMP	258
		Processed eucheuma seaweed	407a	GMP	258
		Propylene glycol esters of fatty acids	477	5,000 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		300 mg/kg	159
		SORBATES		1,000 mg/kg	42
		SULFITES		40 mg/kg	44

Table 11

Sweeteners including honey					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	71, 258
		Salts of oleic acid with calcium, potassium and sodium	470(ii)	GMP	258
		Sodium alginate	401	GMP	258
		Carboxymethyl cellulose	466	GMP	258
		Sodium dihydrogen citrate	331(i)	GMP	258
		Starches, enzyme treated	1405	GMP	258
		Sucralose (Trichlorogalactosucrose)	955	1,500 mg/kg	159,
		Tragacanth gum	413	GMP	258
		Tripotassium citrate	332(ii)	GMP	258
		Trisodium citrate	331(iii)	GMP	258
		Xanthan gum	415	GMP	258
11.5	**Honey**	No additives permitted			
11.6	**Table-top sweeteners including those containing high-intensity sweeteners (saccharin sodium, aspartame, acesulfame potassium, sucralose)**	Steviol glycosides	960	7 mg/ 100 mg	In tablet /liquid and powder forms, 26
		Sucralose (Trichlorogalactosucrose)	955	GMP	
		Acesulfame potassium	950	GMP	188
		[75][Alitame	956	GMP	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Aspartame	951	GMP	191

Table 11

Sweeteners including honey					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Notes**
		Aspartame-acesulfame salt	962	GMP	
		BENZOATES		2,000 mg/kg	13
		Caramel IV –sulfite ammonia caramel	150d	1,200 mg/kg	213
		ETHYLENE DIAMINE TETRA ACETATES		1,000 mg/kg	96,21
		Neotame	961	GMP	
		PHOSPHATES		1,000 mg/kg	56 ,33
		Polyethylene glycol	1521	10,000 mg/kg	
		Polyvinylpyrrolidone	1201	3,000 mg/kg	
		SACCHARINS		GMP	
		SORBATES		1,000 mg/kg	42,192

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
12.0	**Salts, spices, soups, sauces, salads and protein products**				
12.1	**Salt and salt substitutes**	No additives permitted			
12.1.1	**Salt (including edible common salt, iron**	Calcium carbonate	170(i)	20 g/kg	
		Calcium silicate	552	20 g/kg	
		FERROCYANIDES		10 mg/kg	24, 107

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	fortified salt, iodized salt)*	Magnesium carbonate	504(i)	20 g/kg	
		Magnesium oxide	530	GMP	
		Magnesium silicate, synthetic	553(i)	20 g/kg	
		PHOSPHATES		8,800 mg/kg	33
		POLYSORBATES		10 mg/kg	
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	20 g/kg	71
		Silicon dioxide amorphous	551	GMP	
		52[Sodium aluminosilicate]	554	1,000 mg/kg	6,254
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		50 mg/kg	
		Adipic acid	355	250 mg/kg	
		*Only the following additives permitted in double fortified salt			
		Hydroxy propyl methyl cellulose	464	GMP	
		Titanium dioxide	171	GMP	
12.1.2	**Salt substitutes**	Diacetyl tartaric and fatty acid esters of glycerol	472e	16,000 mg/kg	
		FERROCYANIDES		20 mg/kg	24
		PHOSPHATES		4,400 mg/kg	
		Calcium lactate	327	GMP	
		Citric acid	330	GMP	
		Fumaric acid	297	GMP	
		Lactic acid, L-, D- and DL	270	GMP	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Magnesium hydroxide	528	GMP	
		Magnesium hydroxide carbonate	504(ii)	GMP	
		Malic acid, dl-	296	GMP	
		Potassium dihydrogen citrate	332(i)	GMP	
		Sodium acetate	262(i)	GMP	
		Sodium carbonate	500(i)	GMP	
		Sodium dihydrogen citrate	331(i)	GMP	
		Sodium fumarates	365	GMP	
		Tripotassium citrate	332(i)	GMP	
		Trisodium citrate	331(iii)	GMP	
12.2	**Herbs, spices, seasonings and condiments (e.g. seasoning for instant noodles)**	**ASCORBYL ESTERS**		500 mg/kg	10
		Acesulfame K	950	2,000 mg/kg	188
		Butylated hydroxyanisole (BHA)	320	200mg/kg	15, 130
		Butylated hydroxytoluene (BHT)	321	200mg/kg	15, 130
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		70 mg/kg	21
		Neotame	961	32 mg/kg	
		Propyl gallate	310	200 mg/kg	15, 130
		SORBATES		1,000 mg/kg	42
		Tertiary butyl hydroquinone	319	200 mg/kg	
12.2.1	[52]**[Herbs, spices, masalas, spice mixtures**	**POLYSORBATES**		2,000 mg/kg	
		SULFITES		150 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	including oleoresins or extracts/derivatives thereof]				
12.2.2	**Seasonings and condiments**	**BENZOATES**		1,000 mg/kg	13
		Aspartame	951	2,000 mg/kg	
		Curcumin	100	GMP	
		FERROCYANIDES		20 mg/kg	24
		Lauric arginate ethyl ester	243	200 mg/kg	
		PHOSPHATES		2,200 mg/kg	33 , [69][226]
		POLYSORBATES		5,000 mg/kg	
		SACCHARINS		1,500 mg/kg	
		Sucralose	955	700 mg/kg	
		SULFITES		200 mg/kg	44
		Tartaric acid	334	GMP	
		[52][Caramel IV – sulfite ammonia caramel	150d	10,000 mg/kg	
		Paprika oleoresin	160c(i)	GMP]	
12.3	**Vinegars**	**BENZOATES**	210	1,000 mg/kg	Only in brewed vinegar
		Caramel III - ammonia caramel	150c	GMP	
		Caramel IV – sulfiteammonia caramel	150d	GMP	
		HYDROXYBENZOATES, PARA-		100 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Polyvinylpyrrolidone	1201	40 mg/kg	
		SULFITES		100 mg/kg	
12.4	**Mustards**	**ASCORBYL ESTERS**		500 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)	38	50 mg/kg	
		Acesulfame potassium	950	350 mg/kg	
		Allura red AC	129	100 mg/kg	
		Aspartame	951	350 mg/kg	191
		BENZOATES		1,000 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		300 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		500 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfiteammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES		75 mg/kg	
		Grape skin extract	163(ii)	200 mg/kg	
		HYDROXYBENZOATES, PARA-		300 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Neotame	961	12 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		RIBOFLAVINS		300 mg/kg	
		SACCHARINS		320 mg/kg	
		SORBATES		1,000 mg/kg	
		SULFITES		250 mg/kg	
		Sucralose (Trichlorogalactosucrose)	955	140 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	
12.5	**Soups and broths**	**ASCORBYL ESTERS**		200 mg/kg	
		Acesulfame potassium	950	110 mg/kg	
		[75][Alitame	956	40 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Allura red AC	129	100 mg/kg	
		Aspartame	951	1,200 mg/kg	
		BENZOATES		500 mg/kg	
		Brilliant blue FCF		100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200mg/kg	15, 130
		Butylated hydroxytoluene (BHT)	321	100mg/kg	15, 130,340
		CAROTENOIDS		300 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLI		400 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		N, COPPER COMPLEXES			
		Caramel III - ammonia caramel	150c	25,000 mg/kg	
		Caramel IV – sulfiteammonia caramel	150d	25,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	
		IRON OXIDES		100 mg/kg	
		Indigotine (Indigo carmine)	132	100mg/kg	
		Neotame	961	20 mg/kg	
		PHOSPHATES		1,500 mg/kg	
		Propyl gallate	310	200 mg/kg	
		RIBOFLAVINS		GMP	
		SACCHARINS		110 mg/kg	
		SORBATES		1,000 mg/kg	
		Sucralose (Trichlorogalactosucrose)	955	600 mg/kg	
		Sucroglycerides	474	2,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	
		Polydimethylsiloxane	900a	10 mg/kg	
		POLYSORBATES		1,000 mg/kg	
		Ponceau 4R	124	50 mg/kg	
		Tartaric acid	334	GMP	
		Curcumin	100	GMP	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Canthaxanthin	161g	GMP	
		Annatto	160b (i),(ii)	GMP	
		Saffron		GMP	
		Sulphur dioxide	220	150 mg/kg	
12.5.1	**Ready-to-eat soups and broths including canned, bottled, and frozen**	Brilliant blue FCF	133	50 mg/kg	
		Indigotine (Indigo carmine)	132	50 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		RIBOFLAVINS		200 mg/kg	
		Sunset yellow FCF	110	50 mg/kg	
12.5.2	**Mixes for soups and broths**	**CAROTENOIDS**		200 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		GMP	
		Canthaxanthin	161g	GMP	
		Steviol glycosides	960	50 mg/kg	
		Indigotine (Indigo carmine)	132	50 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	127
		[52][Sodium aluminosilicate]	554	570 mg/kg	6
		Sucralose (Trichlorogalactosucrose)	955	50 mg/kg	
		Sulphur dioxide	220	350 mg/kg	Carry over from fruit products
		Tartaric acid	334	1,500 mg/kg	
		Curcumin	100	GMP	
12.6	**Sauces and like products**	Acesulfame potassium	950	1,000 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Aspartame	951	350 mg /kg	
		Indigotine (indigo carmine)	132	100 mg/kg	
		Allura red AC	129	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	15, 130
		Butylated hydroxytoluene (BHT)	321	100 mg/kg	15, 130
		BENZOATES		1,000 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		500 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	
		Canthaxanthin	161g	30 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfiteammonia caramel	150d	30,000 mg/kg	
		Guaiac resin	314	600 mg/kg	
		HYDROXYBENZOATES, PARA-		1,000 mg/kg	
		IRON OXIDES		75 mg/kg	
		PHOSPHATES		300 mg/kg	
		Ponceau 4R	124	50 mg/kg	
		Propyl gallate	310	200 mg/kg	
		RIBOFLAVINS		350 mg/kg	
		SACCHARINS		160 mg/kg	
		SULFITES		300 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Sucralose (Trichlorogalactosucrose)	955	450 mg/kg	
		Sucroglycerides	474	10,000 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	
		Tertiary butylhydroquinone (TBHQ)	319	200 mg/kg	
		L-Tartaric acid		GMP	
		Dimethyl polysiloxane		GMP	
		[52][Propylene glycol alginate	405	200 mg/kg]	
12.6.1	**Emulsified sauces and dips (e.g. mayonnaise, sald dressings, onion dips)**	**ASCORBYL ESTERS**		500 mg/kg	10, 15
		beta-Carotenes, vegetable	160a(ii)	2,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES		100 mg/kg	
		Fast green FCF	143	100 mg/kg	
		Grape skin extract	163(ii)	300 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	-
		Neotame	961	65 mg/kg	
		PHOSPHATES		2,200 mg/kg	
		POLYSORBATES		3,000 mg/kg	
		SORBATES		1,000 mg/kg	
		Annatto	160b(i), (ii)	GMP	
		Steviol glycosides	960	350 mg/kg	
		Paprika oleoresin	160c(i)	GMP	
12.6.2	**Non emulsified sauces (e.g ketchup, cheese sauce, cream**	**ASCORBYL ESTERS**		500 mg/kg	10
		beta-Carotenes, vegetable	160a(ii)	2,000 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
	sauce, brown gravy)	**ETHYLENE DIAMINE TETRA ACETATES (EDTA)**		75 mg/kg	21
		Grape skin extract	163(ii)	300 mg/kg	
		Annatto	160b(i), (ii)	GMP	
		Steviol glycosides	960	350 mg/kg	
		Paprika oleoresin	160c(i)	GMP	
		Lauric arginate ethyl ester	243	200 mg/kg	
		Neotame	961	70 mg/kg	
		PHOSPHATES		2,200 mg/kg	
		POLYSORBATES		5,000 mg/kg	
		SORBATES		1,000 mg/kg	42,127
12.6.3	**Mixes for sauces and gravies**	**ASCORBYL ESTERS**		200 mg/kg	10
		Curcumin	100	GMP	
		Annatto	160b(i), (ii)	GMP	
		Steviol glycosides	960	350 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	2,000 mg/kg	
		Grape skin extract	163(ii)	300 mg/kg	
		Neotame	961	12 mg/kg	
		PHOSPHATES		2,200 mg/kg	
		POLYSORBATES		5,000 mg/kg	
		SORBATES		1,000 mg/kg	
		Sodium aluminosilicate	554	570 mg/kg	
12.6.4	**Clear sauces**	**ASCORBYL ESTERS**		200 mg/kg	10
		Aspartame	951	200 mg/kg	

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		Neotame	961	12 mg/kg	
		PHOSPHATES		2,200 mg/kg	
		POLYSORBATES		5,000 mg/kg	
		SORBATES		1,000 mg/kg	
		Steviol glycosides	960	350 mg/kg	
12.7	**Salads (e.g. macaroni salad, potato salad) and sandwich spreads excluding cocoa-and nut-based spreads of food categories 4.2.2.5 and 5.1.3**	Acesulfame potassium	950	350 mg/kg	
		ASCORBYL ESTERS		200 mg/kg	10
		Aspartame	951	350 mg/kg	
		BENZOATES		1,500 mg/kg	
		CAROTENOIDS		50 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfiteammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	1,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES		100 mg/kg	
		Grape skin extract	163(ii)	1,500 mg/kg	
		Lauric arginate ethyl ester	243	200 mg/kg	
		Neotame	961	33 mg/kg	
		POLYSORBATES		2,000 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		SACCHARINS		200 mg/kg	
		SORBATES		1,500 mg/kg	
		Steviol glycosides	960	115 mg/kg	
		Sucralose (Trichlorogalactosucrose)	955	1,250 mg/kg	
12.8	**Yeast and like products**	Butylated hydroxyanisole (BHA)	320	200 mg/kg	15

Table 12

Salts, spices, soups, salads and protein products					
Food category System	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**Note**
		[70][Sorbitan monostearate	491	10,000 mg/kg]	
12.9	**Soybean-based seasonings and condiments**	**PHOSPHATES**		1,200 mg/kg	
12.9.1	**Fermented soybean paste**	**RIBOFLAVINS**		30 mg/kg	
		SACCHARINS		200 mg/kg	
		SORBATES		1,000 mg/kg	
12.9.2	**Soybean sauce**				
12.9.2.1	**Fermented soybean sauce**	Caramel III - ammonia caramel	150c	20,000 mg/kg	207
		Caramel IV – sulfiteammonia caramel	150d	60,000 mg/kg	
		SACCHARINS		500 mg/kg	
		SORBATES		1,000 mg/kg	42
		Steviol glycosides	960	30 mg/kg	26
12.9.2.2	**Non-fermented soybean sauce**	Caramel III - ammonia caramel	150c	1,500 mg/kg	
		Steviol glycosides	960	165 mg/kg	26
12.9.2.3	**Other soybean sauces**	Caramel III - ammonia caramel	150c	20,000 mg/kg	
		SORBATES		1,000 mg/kg	42
		Steviol glycosides	960	165 mg/kg	26
12.10	**Protein products other than from soybeans**				

Table 13

Foodstuffs intended for particular nutritional uses					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum level**	**Note**
13.0	**Food Stuffs intended for particular nutritional uses**	Food additive provisions for the products under these categories are provided in the relevant standards of Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or Food Safety and Standards (Food or Health Supplements, Nutraceuticals, Foods for Special Dietary Uses, Foods for Special Medical Purpose, Functional Foods, and Novel Food) Regulations, 2016 as the case may be.			

Table 14

Beverages, excluding dairy products					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum level**	**Note**
14.0	**Beverages, excluding dairy products**				
14.1	**Non-alcoholic ("soft") beverages**				
14.1.1	**Waters**	No additives permitted			
14.1.1.1	**Natural mineral waters and source waters**	No additives permitted			
14.1.1.2	**Table waters and sold waters**	No additives permitted			
14.1.2	**Fruit and vegetable juices**				
14.1.2.1	**Fruit juices (fruit juices for industrial use, thermally processed fruits juices)**	Ascorbic acid, L-	300	GMP	
		Calcium ascorbate	302	GMP	
		Carbon dioxide	290	GMP	69
		BENZOATES		1,000 mg/kg	91,13
		Citric acid	330	GMP	
		Malic acid, DL-	296	GMP	115
		Nitrogen	941	GMP	

		PHOSPHATES		1,000 mg/kg	40, 33
		Pectins	440	GMP	35
		SORBATES		1,000 mg/kg	91,42
		SULFITES		50 mg/kg	44
		Sodium ascorbate	301	GMP	
		TARTRATES		4,000 mg/kg	45
		Alginic acid	400	GMP	
		Sodium alginate	401	GMP	
		Calcium alginate	404	GMP	
		Propylene glycol alginate	405	GMP	
		Gum arabic	414	GMP	
		Potassium alginate	402	GMP	
		Pectins	440	GMP	
		[52][Glycerol ester of wood resin]	445(iii)	100 mg/kg	
		Alginic acid	400	GMP	
		Gellan gum	418	GMP	
		Acetic acid	260	GMP	
		Lactic acid	270	GMP	
		L-Tartaric acid	334	GMP	
		Nitrogen	918	GMP	
		Carbon dioxide	290	GMP	
		[70][Nisin	234	5,000 IU	FS04b]
14.1.2.2	**Vegetable juices(vegetable juices for industrial use, thermally processed vegetable juices, thermally processed tomato juice)**	Ascorbic acid, L-	300	GMP	
		Citric acid	330	GMP	
		Carbon dioxide	290	GMP	
		Malic acid, DL-	296	GMP	
		SULFITES		50 mg/kg	44
		Lactic acid	270	GMP	
		Alginic acid	400	GMP	
		L-Tartaric acid	334	GMP	
		PHOSPHATES		GMP	33
		Sucralose	955	250 mg/kg	
		Nitrogen	941	GMP	
		TOCOPHEROLS		GMP	
		Acetic acid	260	GMP	
		BENZOATES		600 mg/kg	13
		Sulphur dioxide	220	1,000 mg/kg	
14.1.2.3	**Concentrates of fruitjuices**	Ascorbic acid, L-	300	GMP	127
		Acetic acid	260	GMP	

	(concentrated fruit juices for industrial use)	**BENZOATES**		1,000 mg/kg	13, 127, 91
		Calcium ascorbate	302	GMP	127
		Carbon dioxide	290	GMP	69, 127
		Citric acid	330	GMP	127
		Malic acid, DL-	296	GMP	127
		Lactic acid	270	GMP	127
		PHOSPHATES		1,000 mg/kg	127, 33, 40
		Pectins	440	GMP	35, 127
		SORBATES		1,000 mg/kg	127, 91, 42
		SULFITES		50 mg/kg	44, 127
		Sodium ascorbate	301	GMP	127
		TARTRATES		4,000 mg/kg	129, 128, 127, 45
		Dimethyl polysiloxane	900a	10mg/kg	
		Mono-and diglycerides of fatty acids of edible oils	471	10mg/kg	
		Nitrogen	918	GMP	
		[52][omit		]	
		Alginic acid	400	GMP	
		Acetic acid	260	GMP	
14.1.2.4	**Concentrates of vegetable juices (concentrated vegetable Juices for industrial use)**	Ascorbic acid, L-	300	GMP	
		Citric acid	330	GMP	
		Sucralose	955	1,250 mg/kg	127
		Lactic acid	270	GMP	
		Dimethylpolysiloxane	900a	10 mg/kg	127
		[52][Mono-and diglycerides of fatty acids]	471	10mg/kg	127
		Nitrogen	[52][941]	GMP	
		Carbon dioxide	290	GMP	
		Malic acid – DL	296	GMP	
		SULFITES		50 mg/kg	44, 127For industrial use 1,500 mg/kg max
		Alginic acid	400	GMP	

		Acetic acid	260	GMP	
		BENZOATES		600 mg/kg	13
		SORBATES		100 mg/kg	42,127
14.1.3	**Fruit and vegetable nectars**	Steviol glycosides	960	200 mg/kg	26
14.1.3.1	**Fruit nectar**	Acesulfame potassium	950	350 mg/kg	188
		Ascorbic acid, L-	300	GMP	
		Aspartame	951	600 mg/kg	191
		Calcium ascorbate	302	GMP	
		BENZOATES		1,000 mg/kg	91, 13
		Carbon dioxide	290	GMP	69
		Citric acid	330	GMP	
		Malic acid, DL-	296	GMP	
		PHOSPHATES		1,000 mg/kg	40,33
		Pectins	440	GMP	
		SACCHARINS		80 mg/kg	
		Sodium ascorbate	301	GMP	
		SORBATES		1,000 mg/kg	42, 91
		SULFITES		70mg/kg	44
		Sucralose (Trichlorogalactosucrose)	955	300 mg/kg	
		TARTRATES		4,000 mg/kg	128, 45
		Alginic acid	400	GMP	
		Sodium alginate	401	GMP	
		Calcium alginate	404	GMP	
		Propylene glycol alginate	405	GMP	
		Chlorophylls	140	100 mg/kg	
		Caramel	150a	100 mg/kg	
		Curcumin	100	100 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		Canthaxanthin	161g	100 mg/kg	
		RIBOFLAVINS		100 mg/kg	
		Annatto	160b(i), (ii)	100 mg/kg	
		Saffron		GMP	

14.1.3.2	**Vegetable nectar**	Acesulfame potassium	950	350 mg/kg	188
		Ascorbic acid, L-	300	GMP	
		Aspartame	951	600 mg/kg	191
		BENZOATES		120 mg/kg	13
		Citric acid	330	GMP	
		Curcumin	100	100 mg/kg	
		Malic acid, DL-	296	GMP	
		Neotame	961	65 mg/kg	
		Pectins	440	GMP	
		SACCHARINS		80 mg/kg	
		Saffron		GMP	
		SORBATES		300 mg/kg	42
		Sucralose (Trichlorogalactosucrose)	955	300 mg/kg	
		Alginic acid	400	GMP	
		Chlorophylls	140	100 mg/kg	
		Caramel	150a	100 mg/kg	
		[52][Omit		]	
		beta-Carotenes, vegetable	160a(ii)	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		Canthaxanthin	161g	100 mg/kg	
		RIBOFLAVINS		100 mg/kg	
		Annatto	160(b) (i), (ii)	100 mg/kg	
		SULPHITES		70 mg/kg	44
		Sodium hexametaphosphate	452(i)	1,000 mg/kg	
		Tartaric acid	334	GMP	
14.1.3.3	**Concentrates of fruit nectar**	Acesulfame potassium	950	350 mg/kg	188, 127
		Ascorbic acid, L-	300	GMP	127
		Alginic acid	400	GMP	
		Sodium alginate	401	GMP	
		Calcium alginate	404	GMP	
		Propylene glycol alginate	405	GMP	
		Aspartame	951	600 mg/kg	191, 127
		BENZOATES		1,000 mg/kg	13,91,127

		Calcium ascorbate	302	GMP	127
		Carbon dioxide	290	GMP	69, 127
		Citric acid	330	5,000 mg/kg	127
		Malic acid, DL-	296	GMP	127
		Lecithins	322(i), (ii)	GMP	
		PHOSPHATES		1,000 mg/kg	40, 33, 127
		Pectins	440	GMP	127
		SACCHARINS		80 mg/kg	127
		SORBATES		1,000 mg/kg	127, 91, 42
		Sodium ascorbate	301	GMP	127
		Sucralose (Trichlorogalactosucrose)	955	300 mg/kg	127
		SULFITES		50 mg/kg	44, 127
		TARTRATES		4,000 mg/kg	45,127
14.1.3.4	**Concentrates of vegetable nectar**	Acesulfame potassium	950	350 mg/kg	127,188
		Ascorbic acid, L-	300	GMP	
		Aspartame	951	600 mg/kg	127
		BENZOATES		600 mg/kg	13,127
		Citric acid	330	GMP	
		Malic acid, DL-	296	GMP	
		Neotame	961	65 mg/kg	127
		Pectins	440	GMP	
		SULFITES		50 mg/kg	127, 44
		Sucralose (Trichlorogalactosucrose)	955	300 mg/kg	127
14.1.4	**Water-based flavoured drinks, including "sport,""energy," or "electrolyte" drinks and particulated drinks, includes carbonated fruit beverages, carbonated**	**ASCORBYL ESTERS**		1,000 mg/kg	15, 10
		Acesulfame potassium	950	600 mg/kg	188
		[75][Alitame	956	40 mg/kg	]
		[Amendment for omission of this provision w.e.f. 1st February 2022]			
		Allura red AC	129	100 mg/kg	127
		Anthocyanins	163(i), (iii)	GMP	
		Aspartame	951	600 mg/kg	191

	beverages with fruit	**BENZOATES**		600 mg/kg	13, 301,123
		Beeswax	901	200 mg/kg	131
		Brilliant blue FCF	133	100 mg/kg	
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		300 mg/kg	127
		Candelilla wax	902	200 mg/kg	131
		Caramel III - ammonia caramel	150c	5,000 mg/kg	9
		Caramel IV –sulfite ammonia caramel	150d	50,000 mg/kg	127
		Carnauba wax	903	200 mg/kg	131
		beta-Carotenes, vegetable	160a(ii)	2,000 mg/kg	
		Cyclodextrin, beta-	459	500 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	127
		ETHYLENE DIAMINE TETRA ACETATES		200 mg/kg	21
		Fast green FCF	143	100 mg/kg	
		Glycerol ester of wood rosin	445(iii)	150 mg/kg	100 mg/kg max for carbonated water
		Grape skin extract	163(ii)	300 mg/kg	181,127
		HYDROXYBENZOATES, PARA-		500 mg/kg	27
		IRON OXIDES		100 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Isopropyl citrates	384	200 mg/kg	
		Neotame	961	33 mg/kg	
		PHOSPHATES		1,000 mg/kg	33,127
		POLYSORBATES		500 mg/kg	127

		Polydimethylsiloxane	900a	20 mg/kg	127
		Polyethylene glycol	1521	1,000 mg/kg	
		Ponceau 4R	124	100 mg/kg	50 mg/kg max for carbonated water
		Propyl gallate	310	1,000 mg/kg	15
		Propylene glycol esters of fatty acids	477	500 mg/kg	
		QUILLAIA EXTRACTS		50 mg/kg	[52][293, 132]
		RIBOFLAVINS		100mg/kg	
		SORBATES		500 mg/kg	42, 127
		SULFITES		70 mg/kg	143, 44, 127
		Stannous chloride	512	20 mg/kg	43
		Stearyl citrate	484	500 mg/kg	
		Steviol glycosides	960	200 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	300 mg/kg	127
		Annatto	160b(i), (ii)	100 mg/kg	
		Canthaxanthin	161g	100 mg/kg	
		Curcumin	100	100 mg/kg	
		Carmoisine	122	100 mg/kg	
		Erythrosine	127	50 mg/kg	
		Dimethyl dicarbonate	242	250 mg/kg	18 (subject to a maximum methanol content in final product as 200 mg/litre)
		Saffron		GMP	
		Tartrazine	102	100 mg/kg	
		Sucroglycerides	474	200 mg/kg	219

		Sucrose acetate isobutyrate	444	500 mg/kg	
		Sunset yellow FCF	110	100 mg/kg	127
		THIODIPROPIONATES		1,000 mg/kg	15, 46
		Triethyl citrate	1505	200 mg/kg	
		Quinine salts		100 mg/kg	
14.1.4.1	**Carbonated water-based flavoured drinks (beverages non-alcoholic-cabonated, carbonated water)**	Canthaxanthin	161g	5 mg/kg	
		Lauric arginate ethyl ester	243	50 mg/kg	
		RIBOFLAVINS		50 mg/kg	
		SACCHARINS		300 mg/kg	
14.1.4.2	**Non-carbonated water-based flavoured drinks including punches and ades, ginger cocktail (ginger beer and gingerale), thermally processed fruit beverages/ fruit drinks/ready to serve fruit beverages**	Lauric arginate ethyl ester	243	50 mg/kg	
		RIBOFLAVINS		50 mg/kg	
		SACCHARINS		300 mg/kg	
		L-Tartaric acid	334	GMP	
		Amendment for insertion of new provision [77][No colours permitted in iced tea and iced tea mixes.] *[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]*			
		Curcumin	100	200 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	200 mg/kg	
		CAROTENOIDS		200 mg/kg	
		[52][omit			
				]	
		Annatto	[52][160b (i), (ii)]	200 mg/kg	
		Saffron		GMP	
		Ponceau 4R	124	200 mg/kg	XT99

		Carmoisine	122	200 mg/kg	XT99
		Erythrosine	127	100 mg/kg	XT99
		Tartarzine	102	200 mg/kg	XT99
		Sunset yellow FCF	110	200 mg/kg	XT99
		Indogotine (Indigo carmine)	132	200 mg/kg	XT99
		Brilliant Blue FCF	133	200 mg/kg	XT99
		Fast green FCF	143	200 mg/kg	XT99
		BENZOATES		600 mg/kg	
		SULFITES		350 mg/kg	XT100
		SORBATES		1,000 mg/kg	XT101
		Propylene glycol alginate	405	GMP	
		Alginic acid	400	GMP	
		Sodium alginate	401	GMP	
		Calcium alginate	404	GMP	
		[52][omit			]
		Glycerol ester of wood rosin	445(iii)	100 mg/kg	
		Sodium aluminium silicate	554	5 g/kg	
14.1.4.3	**Concentrates (liquid or solid) for water-based flavoured drinks (synthetic syrups for dispensers, sharbat (synthetic syrup)*,** squashes, crushes, fruit syrups, cordials and barley water	Amendment for insertion of new provision [77][No colours permitted in iced tea and iced tea mixes.] *[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]*			
		Canthaxanthin	161g	5 mg/kg	127, XT102
		Ferric ammonium citrate	381	10 mg/kg	23
		Lauric arginate ethyl ester	243	50 mg/kg	127
		Polyvinylpyrrolidone	1201	500 mg/kg	
		RIBOFLAVINS		50 mg/kg	XT102
		SACCHARINS		300 mg/kg	127
		[70][*The following additives permitted in synthetic syrups for dispensers			127]
		L-Tartaric acid	334	GMP	

Phosphoric acid	338	GMP	In cola beverages only
SACCHARINS		450 mg/kg	
Aspartame	951	3,000 mg/kg	
Acesulfame potassium	950	1,500 mg/kg	
Curcumin	100	200 mg/kg	XT102
beta-Carotenes, vegetable	160a (ii)	200 mg/kg	XT102
CAROTENOIDS		200 mg/kg	XT102
Canthaxanthin	161g	200 mg/kg	
RIBOFLAVINS		200 mg/kg	XT102
Annatto	160b (i), ii)	200 mg/kg	XT102
Saffron		GMP	
Ponceau 4R	124	200 mg/kg	127
Carmoisine	122	200 mg/kg	127
Erythrosine	127	100 mg/kg	127
Tartarzine	102	200 mg/kg	127
Sunset yellow FCF	110	200 mg/kg	127
Indogotine (Indigo carmine)	132	200 mg/kg	127
Brilliant blue FCF	133	200 mg/kg	127
Fast green FCF	143	200 mg/kg	127
BENZOATES		600mg/kg	127
SULFITES		350 mg/kg	44
Glycerol ester of wood rosin	445(iii)	450 mg/kg	127
Quinine sulphate		450 mg/kg	Subject to 100 mg/kg in ready to serve beverage after dilution
[70][*The following additives are permitted in sharbat (synthetic syrup)			127]
L-Tartaric acid	334	GMP	
Curcumin	100	200 mg/kg	

		beta-Carotenes, vegetable	160a(ii)	200 mg/kg	
		CAROTENOIDS		200 mg/kg	
		Canthaxanthin	161g	200 mg/kg	
		RIBOFLAVINS		200 mg/kg	
		Annatto	160(b)	200 mg/kg	
		Ponceau 4R	124	200 mg/kg	
		Saffron		GMP	
		Erythrosine	127	100mg/kg	
		Carmosine	122	200 mg/kg	
		Sunset yellow FCF	110	200mg/kg	
		Indogotine (Indigo carmine)	132	200mg/kg	
		Brilliant blue FCF	133	200mg/kg	
		Fast green FCF	143	200mg/kg	
		Tartrazine	102	200 mg/kg	
		BENZOATES		600 mg/kg	13
		SULFITES		350 mg/kg	122, 44
		SORBATES		1,000 mg/kg	42
		Propylene glycol alginate	405	GMP	
14.1.5	**Coffee, coffee /coffee substitutes, tea, herbal infusions, and other hot cereal and grain beverages, excluding cocoa**	Acesulfame potassium	950	600 mg/kg	188, 160
		Acetic acid, glacial	260	GMP	160
		Acetic and fatty acid esters of glycerol	472a	GMP	160
		Acetylated distarch adipate	1422	GMP	160
		Acetylated distarch phosphate	1414	GMP	160
		Acid-treated starch	1401	GMP	160
		Alginic acid	400	GMP	160
		Agar	406	GMP	160
		Alkaline treated starch	1402	GMP	160
		Ascorbic acid, L-	300	GMP	160
		Aspartame	951	600 mg/kg	160
		BENZOATES		1,000 mg/kg	13
		Beeswax	901	GMP	108
		Bleached starch	1403	GMP	160
		Calcium carbonate	170(i)	GMP	160

		Calcium chloride	509	GMP	160
		Calcium lactate	327	GMP	160
		Candelilla wax	902	GMP	108
		Carbon dioxide	290	GMP	59,160
		Caramel III - ammonia caramel	150c	10,000 mg/kg	7, 160
		Caramel IV –sulfite ammonia caramel	150d	10,000 mg/kg	7,127
		Carnauba wax	903	200 mg/kg	108
		Carob bean gum	410	GMP	160
		Carrageenan	407	GMP	160
		Citric acid	330	GMP	160
		Citric and fatty acid esters of glycerol	472c	GMP	160
		Dextrins, roasted starch	1400	GMP	90,160
		Diacetyltartaric and fatty acid esters of glycerol	472e	500 mg/kg	142
		Dimethyl dicarbonate	242	250 mg/kg	18
		Distarch phosphate	1412	GMP	160
		Disodium 5'-guanylate	627	GMP	201
		Disodium 5'-inosinate	631	GMP	201
		Disodium 5'-Ribonucleotides	635	GMP	201
		ETHYLENE DIAMINE TETRA ACETATES	386	35 mg/kg	21
		Fumaric acid	297	GMP	160
		Gellan gum	418	GMP	160
		Glycerol	422	GMP	160
		Guar gum	412	GMP	160
		Gum arabic (Acacia gum)	414	GMP	160
		HYDROXYBENZOATES, PARA-		450 mg/kg	27,160
		Hydroxypropyl cellulose	463	GMP	160

		Hydroxypropyl distarch phosphate	1442	GMP	160
		Hydroxypropyl methyl cellulose	464	GMP	160
		Hydroxypropyl starch	1440	GMP	160
		Karaya gum	416	GMP	160
		Konjac flour	425	GMP	160
		Lactic and fatty acid esters of glycerol	472b	GMP	160
		Lecithins	322(i), (ii)	GMP	160
		Magnesium carbonate	504(i)	GMP	160
		Magnesium chloride	511	GMP	160
		Magnesium hydroxide	528	GMP	160
		Magnesium hydroxide carbonate	504(ii)	GMP	160
		Malic acid, DL-	296	GMP	160
		Methyl cellulose	461	GMP	160
		Methyl ethyl cellulose	465	GMP	160
		Microcrystalline cellulose (cellulose gel)	460(i)	GMP	160
		Mono- and di-glycerides of fatty acids	471	GMP	160
		Monosodium L-glutamate	621	GMP	160
		Monostarch phosphate	1410	GMP	160
		Neotame	961	50 mg/kg	160
		Nitrogen	941	GMP	160, 59
		Oxidized starch	1404	GMP	160
		PHOSPHATES		300 mg/kg	33, 160
		Pectins	440	GMP	160
		Phosphated distarch phosphate	1413	GMP	160
		Potassium carbonate	501(i)	GMP	160

		Potassium chloride	508	GMP	160
		Potassium dihydrogen citrate	332(i)	GMP	160
		Powdered cellulose	460(ii)	GMP	160
		Processed eucheuma seaweed	407a	GMP	160
		Pullulan	1204	GMP	160
		SACCHARINS		200 mg/kg	160
		SORBATES		500 mg/kg	42,160
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	470(i)	GMP	160
		Salts of oleic acid with calcium, potassium and sodium	470(ii)	GMP	160
		Shellac, bleached	904	GMP	108
		Sodium DL-malate	350(ii)	GMP	160
		Silicon dioxide, amorphous	551	GMP	321
		Sodium acetate	262(i)	GMP	160
		Sodium alginate	401	GMP	160
		Sodium ascorbate	301	GMP	160
		Sodium carbonate	500(i)	GMP	160
		Carboxymethyl cellulose	466	GMP	160
		Sodium dihydrogen citrate	331(i)	GMP	160
		Sodium fumarates	365	GMP	160
		Sodium gluconate	576	GMP	160
		Sodium hydrogen carbonate	500(ii)	GMP	160
		Sodium lactate	325	GMP	160
		Starches, enzyme treated	1405	GMP	160
		Starch sodium octenyl succinate	1450	GMP	160
		Steviol glycosides	960	200 mg/kg	160,26

		Sucralose (Trichlorogalactosucrose)	955	300 mg/kg	160
		Sucroglycerides	474	1,000 mg/kg	176
		Tara gum	417	GMP	160
		Tragacanth gum	413	GMP	160
		Tripotassium citrate	332(ii)	GMP	160
		Trisodium citrate	331(iii)	GMP	160
		Xanthan gum	415	GMP	160
14.2	**Alcoholic beverages including alcohol-free and low-alcoholic counterparts**				
14.2.1	**Beer andmalt beverages**	Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV – sulfiteammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		25 mg/kg	21
		Polydimethylsiloxane	900a	10 mg/kg	
		Polyvinylpyrrolidone	1201	10 mg/kg	36
		SULFITES		50 mg/kg	44
14.2.2	**Cider and perry**	**BENZOATES**		1,000mg/kg	124, 13
		CAROTENOIDS-		200 mg/kg	
		Caramel III - ammonia caramel	150c	1,000 mg/kg	
		Caramel IV – sulfiteammonia caramel	150d	1,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	

		Dimethyl dicarbonate	242	250 mg/kg	18
		Grape skin extract	163(ii)	300 mg/kg	181
		HYDROXYBENZOATES, PARA-		200 mg/kg	27
		Lysozyme	1105	500 mg/kg	
		PHOSPHATES		880 mg/kg	33
		Polydimethylsiloxane	900a	10 mg/kg	
		Polyvinylpyrrolidone	1201	2 mg/kg	36
		RIBOFLAVINS		300 mg/kg	
		SORBATES		500 mg/kg	42
		SULFITES		200 mg/kg	44
14.2.3	**Grape wines**	Dimethyl dicarbonate	242	200 mg/kg	18
		Carbon dioxide	290	GMP	60
		Lysozyme	1105	500 mg/kg	
		SORBATES		200 mg/kg	42
		SULFITES		350 mg/kg	44, 103
		[31][52][Malic acid, DL-, L-]	296	GMP	FS04a
		Ascorbic acid L-	300	300 mg/kg	
		Citric acid	330	1,000 mg/kg	FS04a
		Tartaric acid L(+),DL	334	GMP	FS04a
		Lactic acid	270	GMP	FS04a
		Gum arabic (Acacia Gum)	414	300 mg/kg	
		Tannins	181	GMP	
		Metatartaric acid	353	100 mg/kg	
		Caramel (plain)	150a	GMP	(allowed only for liqueur wines)
		Carboxymethyl-Cellulose	466	100 mg/kg	(For white and sparkling wines)
		Calcium carbonate	170(i)	GMP	
		Polyvinyl-polypyrrolidone	1202	800 mg/kg	
		Nitrogen	941	GMP	

		Oxygen	948	GMP	
		Isoascorbic acid (Erythorbic acid)	315	250 mg/ml	
		[52][Potassium-D,L-, L(+)- tartrate, Potassium bitartrate	336	GMP]	
		Calcium tartrate	354	GMP	
		Copper sulphate (and Copper citrate)	519,	10mg/l	
		Argon	938	GMP	
		Caramel II	150 b	GMP	
		Yeast manno proteins		GMP	
		Potassium ferrocyanide	536	GMP	
		Urease		GMP	
		Silver chloride		10mg/l	
		Ammonium phosphate	342(i)	300 mg/l	
		Diammonium diphosphate	342(ii)	300 mg/l	(for sparkling wines)
		Ammonium sulfate	517	300 mg/l	(expressed as the salt) (for sparkling wines)
		Charcoal for oenogical use (Oenological Carbon)		100 g/hl	
		Ammonium bisulphite (ammonium hydrogen sulphite)	-	GMP	
		Thiamin hydrochloride		GMP	

		Yeasts products coming from degradation of yeasts (autolysate, inert cells).		GMP	
		Potassium carbonate	501(i)	GMP	
		Potassium bicarbonate (Potassium hydrogen carbonate)	501(ii)	GMP	
		Lactic acid bacteria	-	GMP	The lactic acid bacteria must belong to the *Oenococcus*, *Leuconostoc*, *Lactobacillus* and *Pediococcus* genus and must be isolated from grapes, musts, wine or have been derived from these bacteria.
		Polyvinylpolypyrrolidone	1202	800 mg/l	
		Proteins from plant origin	-	GMP	The plant protein extracted from wheat

					(*Triticum vulgaris*), peas (*Pisum sativum*), or potatoes (*Solanum tuberosum*) .
		Casein	-	GMP	
		Potassium caesinate	-	GMP	
		Gelatin (edible)	-	GMP	Subject to proper label declaration. These are processing aids.
		Isinglass (Fish Glue)		GMP	
		Egg white albumin		GMP	
		Silicon dioxide	551	GMP	
		Bentonite	558	GMP	
		Aluminium silicate (Kaolin)	559	GMP	
		β-Glucanases		GMP	
		Yeast protein extract	-	GMP	The proteins of yeast of *Saccharomyces* sp. yeast.
		Adsorbant Copolymer Treatment polyvinylimidazole – polyvinylpyrrolidone (PVI/PVP)		GMP	
		Microcrystalline cellulose	460 (i)	GMP	

		Calcium alginate	404	GMP	(Allowed only for sparkling and semi-sparkling wines obtained by fermentation in bottle).
		Potassium alginate	402	GMP	-
		Yeast	-	GMP	-
		Calcium phytate		GMP	-
		Chitosan		GMP	-
		Chitin-Glucan		GMP	-
		Mixture of Mono- and diglycerides of oleic Acid		GMP	-]
14.2.3.1	**Still grape wines**				
14.2.3.2	**Sparkling and semi sparkling grape wines**				
14.2.3.3	**Fortified grape wines, grape liquor wines and sweet grape wines**	Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV –sulfite ammonia caramel	150d	50,000 mg/kg	
14.2.4	**Wines (other than grape)**	**BENZOATES**		1,000mg/kg	124, 13
		CAROTENOIDS		200 mg/kg	
		Caramel III - ammonia caramel	150c	1,000 mg/kg	
		Caramel IV –sulfite ammonia caramel	150d	1,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	

		Dimethyl dicarbonate	242	250 mg/kg	18
		Grape skin extract	163(ii)	300 mg/kg	181
		HYDROXYBENZOATES, PARA-		200 mg/kg	27
		RIBOFLAVINS		300 mg/kg	
		SORBATES		500 mg/kg	42
		SULFITES		200 mg/kg	44
14.2.5	**Mead**	**BENZOATES**		1,000mg/kg	13
		Caramel III - ammonia caramel	150c	1, 000 mg/kg	
		Caramel IV – sulfiteammonia caramel	150d	1, 000 mg/kg	
		Dimethyl dicarbonate	242	200 mg/kg	18
		HYDROXYBENZOATES, PARA-		200 mg/kg	27
		PHOSPHATES		440 mg/kg	33,88
		SORBATES		200 mg/kg	42
		SULFITES		200 mg/kg	44
14.2.6	**Distilled spirituous beverages containing more than 15 % alcohol**	**CAROTENOIDS**		200 mg/kg	
		Canthaxanthin	161g	5 mg/kg	
		Caramel III - ammonia caramel	150c	50,000 mg/kg	
		Caramel IV –sulfite ammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	5,000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES (EDTA)		25 mg/kg	21
		Grape skin extract	163(ii)	300 mg/kg	181
		PHOSPHATES		440mg/kg	33, 88
		POLYSORBATES		120 mg/kg	
		SULFITES		200 mg/kg	44
		Sucroglycerides	474	5,000 mg/kg	
		[31][Caramel II -	150 b	GMP	-

		Gold (colour)	175	GMP	-
		Silver (colour)	174	GMP	-
		Glycerol esters Of wood Resin	445(iii)	GMP	-
		Alpha-Tocopherol	307	GMP	-
		RIBOFLAVINS		GMP	-
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	**-]**
14.2.7	**Aromatized alcoholic beverages**	Acesulfame potassium	950	350 mg/kg	188
		Aspartame	951	600 mg/kg	191
		Aspartame-acesulfame salt	962	350 mg/kg	113
		BENZOATES		1,000mg/kg	13
		CAROTENOIDS	160e	200 mg/kg	
		Canthaxanthin	161g	5 mg/kg	
		Caramel III - ammonia caramel	150c	50, 000 mg/kg	
		Caramel IV –sulfite ammonia caramel	150d	50,000 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	600 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	10, 000 mg/kg	
		ETHYLENE DIAMINE TETRA ACETATES		25 mg/kg	21
		Grape skin extract	163(ii)	300 mg/kg	181
		HYDROXYBENZOATES, PARA-		1,000 mg/kg	224, 27
		Neotame	961	33 mg/kg	
		POLYSORBATES		120 mg/kg	
		Polydimethylsiloxane	900a	10 mg/kg	
		RIBOFLAVINS		100 mg/kg	
		SACCHARINS		80 mg/kg	
		SORBATES		500 mg/kg	224, 42
		SULFITES		250 mg/kg	44

		Sucralose (Trichlorogalactosucrose)	955	700 mg/kg	
		Sucroglycerides	474	5,000 mg/kg	
		[31][Phosphoric acid	338	1,000 mg/kg	-]

Table 15

Ready-to–eat savouries

system	Name	Additive	INS No	Recommended Maximum Level	NOTE
15.0	**Ready-to-eat savouries**	Acesulfame potassium	950	350 mg/kg	188
		Aspartame	951	500 mg/kg	191
		Neotame	961	32 mg/kg	
		Beeswax	901	GMP	3
		Butylated hydroxytoluene (BHT)	321	200mg/kg	15, 130
		Candelilla wax	902	GMP	3
		Carnauba wax	903	GMP	3
		Caramel III - ammonia caramel	150c	10,000 mg/kg	
		Caramel IV –sulfite ammonia caramel	150d	10,000 mg/kg	
		PHOSPHATES		2,200 mg/kg	33
		SACCHARINS		100 mg/kg	
		Steviol glycosides	960	170 mg/kg	26
		Sucralose (Trichlorogalactosucrose)	955	1,000 mg/kg	
		Shellac, bleached	904	GMP	3
		THIODIPROPIONATES		200 mg/kg	46
		TBHQ	319	200mg/kg	15, 130
15.1	**Snacks and savouries –potato, cereal, flour or starch**	**ASCORBYL ESTERS**		200 mg/kg	10
		Allura red AC	129	100 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200mg/kg	15, 130
		CAROTENOIDS		100 mg/kg	

Table 15

Ready-to–eat savouries					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**NOTE**
	based (from roots and tubers, pulses and legumes)	**CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES**		350 mg/kg	
		Canthaxanthin	161g	45 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	100 mg/kg	
		Cyclodextrin, beta-	459	500 mg/kg	
		Diacetyltartaric and fatty acid esters of glycerol	472e	20,000 mg/kg	
		Grape skin extract	163(ii)	500 mg/kg	181
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		IRON OXIDES		500 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		Propyl gallate	310	200 mg/kg	15, 130
		RIBOFLAVINS		300 mg/kg	
		BENZOATES		1,000 mg/kg	13
		SORBATES		1,000 mg/kg	42
		SULFITES		50 mg/kg	44
		TOCOPHEROLS		GMP	
		Sunset yellow FCF	110	100 mg/kg	
		[70][Paprika oleoresin	160c(i)	GMP	
		Curcumin	100(i)	GMP	
		Turmeric	100(ii)	GMP]	
15.2	**Processed nuts including coated nuts and nut mixtures**	**ASCORBYL ESTERS**		200 mg/kg	10
		Allura red AC	129	100 mg/kg	
		Brilliant blue FCF	133	100 mg/kg	
		Butylated hydroxyanisole (BHA)	320	200 mg/kg	15, 130
		CAROTENOIDS		100 mg/kg	
		CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES		100 mg/kg	

Table 15

Ready-to–eat savouries					
Food Category system	**Food Category Name**	**Food Additive**	**INS No**	**Recommended Maximum Level**	**NOTE**
		beta-Carotenes, vegetable	160a(ii)	GMP	3
		Diacetyltartaric and fatty acid esters of glycerol	472e	10,000 mg/kg	
		Grape skin extract	163(ii)	300 mg/kg	181
		HYDROXYBENZOATES, PARA-		300 mg/kg	27
		IRON OXIDES		400 mg/kg	
		Indigotine (Indigo carmine)	132	100 mg/kg	
		Neotame	961	32 mg/kg	
		Ponceau 4R	124	100 mg/kg	
		Propyl gallate	310	200 mg/kg	15, 130
		RIBOFLAVINS		1,000 mg/kg	
		SORBATES		1,000 mg/kg	42
15.3	**Snacks – fish based**	**CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES**		350 mg/kg	
		beta-Carotenes, vegetable	160a(ii)	100 mg/kg	
		Grape skin extract	163(ii)	400 mg/kg	

Explanation I (for 11.6 Table top sweeteners): Maximum limit of artificial sweetener in the product shall be as in reconstituted beverage or food or in final beverage or food for consumption, as the case may be. The product label shall give clear instruction for reconstitution of products for making final beverage or food for consumption as the case may be.

Provided where the artificial sweetener(s) is/are used in carbonated water/ sweetened aerated water/ fruit beverage/ carbonated fruit beverage/ fruit nectar, the requirement of minimum total soluble solids shall not apply.

Provided further table top sweetener may contain the following carrier or filler articles with label declaration as provided in Regulation 2.4.5 (24, 25, 26, 27, 28 and 29) of Food Safety and Standards (Packaging and Labelling) Regulations, 2011. Namely,-

(i) Dextrose

(ii) Lactose

(iii) Maltodextrin

(iv) Mannitol

(v) Sucrose

(vi) Isomalt

(vii) Citric acid

(viii) Calcium silicate

(ix) Carboxy methyl cellulose

(x) Cream of tartar, IP

(xi) Cross carmellose sodium

(xii) Colloidal silicone dioxide

(xiii) Glycine

(xiv) L-leucine

(xv) Magnesium stearate, IP

(xvi) Purified talc

(xvii) Poly vinyl pyrrolidone

(xviii) Providone

(xix) Sodium hydrogen carbonate

(xx) Starch

(xxi) Tartaric acid

(xxii) Erythritol

Explanation II (for preservatives)

The use of more than one preservative has been allowed in the alternative, those preservatives may be used in combination with one or more alternatives, provided the quantity of each preservative so used does not exceed such number of parts out of those specified for that preservative of the aforesaid tables as may be worked out on the basis of the proportion in which such preservatives are combined.

Annexure-1

All capital and bold additives in the Table 1 to 15 refers to the group of additives as listed below

Group Name	Additive Name	INS No.
SULFITES	Sulfur dioxide	220
	Sodium sulfite	221
	Sodium hydrogen sulfite	222
	Sodium disulfite	223
	Potassium metabisulfite	224
	Potassium sulfite	225
	Calcium hydrogen sulfite	227
	Potassium hydrogen sulfite	228
	Sodium thiosulfate	539
PHOSPHATES	Phosphoric acid	338
	Sodium hydrogen phosphate	339(i)
	Disodium hydrogen phosphate	339(ii)
	Trisodium orthophosphate	339(iii)
	Potassium dihydrogen phosphate	340(i)
	Dipotassium hydrogen phosphate	340(ii)
	Tripotassium ydrogen phosphate	340(iii)
	Monocalcium orthophosphate	341(i)
	Calcium hydrogen phosphate	341(ii)
	Tricalcium phosphate	341(iii)
	Ammonium dihydrogen phosphate	342(i)
	Diammonium Hydrogen phosphate	342(ii)
	Magnesium phosphate	343(i)
	Dimagnesium hydrogen phosphate	343(ii)
	Trimagnesium phosphate	343(iii)
	Disodium diphosphate	450(i)
	Trisodium diphosphate	450(ii)
	Tetrasodium diphosphate	450(iii)
	Tetrapotassium diphosphate	450(v)
	Dicalcium diphosphate	450(vi)
	Calcium dihydrogen diphosphate	450(vii)
	Pentasodium triphosphate	451(i)
	Pentapotassium triphosphate	451(ii)
	Sodium polyphosphate	452(i)
	Potassium polyphosphate	452(ii)
	Sodium calcium polyphosphate	452(iii)
	Calcium polyphosphate	452(iv)
	Ammonium polyphosphate	452(v)

Group Name	Additive Name	INS No.
	Magnesium dihydrogen diphosphate	450(ix)
RIBOFLAVINS	Riboflavin, synthetic	101(i)
	Riboflavin 5'-phosphate sodium	101(ii)
	Riboflavin (Bacillus subtilis)	101(iii)
ASCORBYL ESTERS	Ascorbyl palmitate	304
	Ascorbyl stearate	305
BENZOATES	Benzoic acid	210
	Sodium benzoate	211
	Potassium benzoate	212
	Calcium benzoate	213
CAROTENOIDS	beta-Carotenes (synthetic)	160a(i)
	beta-Carotenes (Blakeslea trispora)	160a(iii)
	beta-apo-8'-Carotenal	160e
	beta-apo-8'-Carotenoic acid, ethyl ester	160f
CHLOROPHYLLS AND CHLOROPHYLLINS, COPPER COMPLEXES	Chlorophylls, copper complexes	141(i)
	Chlorophyllin copper complexes, sodium and potassium salts	141(ii)
HYDROXYBENZOATES, PARA-	Ethyl para-hydroxybenzoate	214
	Methyl para-hydroxybenzoate	218
NITRITES	Potassium nitrite	249
	Sodium nitrite	250
QUILLAIA EXTRACTS	Quillaia extract type 2	999(ii)
	Quillaia extract type I	999(i)
SODIUM ALUMINIUM PHOSPHATES	Sodium aluminium phosphate, acidic	541(i)
	Sodium aluminium phosphate, basic	541(ii)
STEAROYL LACTYLATES	Calcium stearoyl lactylate	482(i)
	Sodium stearoyl lactylate	481(i)
THIODIPROPIONATES	Dilauryl thiodipropionate	389
	Thiodipropionic acid	388
TOCOPHEROLS	dl-alpha-Tocopherol	3 07c
	d-alpha-Tocopherol	307a
	Tocopherol concentrate, mixed	307b
SACCHARINS	Saccharin	954(i)
	Calcium saccharin	954(ii)
	Potassium saccharin	954(iii)
	Sodium saccharin	954(iv)
SORBATES	Sorbic acid	200
	Sodium sorbate	201
	Potassium sorbate	202
	Calcium sorbate	203
POLYSORBATES	Polyoxyethylene (20) sorbitan monolaurate	432
	Polyoxyethylene (20) sorbitan monooleate	433

Group Name	Additive Name	INS No.
	Polyoxyethylene (20) sorbitan monopalmitate	434
	Polyoxyethylene (20) sorbitan monostearate	435
	Polyoxyethylene (20) sorbitan tristearate	436
POLYOXYETHYLENE STEARATES	Polyoxyethylene (40) stearate	431
	Polyoxyethylene (8) stearate	430
IRON OXIDES	Iron oxide, black	172(i)
	Iron oxide, red	172(ii)
	Iron oxide, yellow	172(iii)
FERROCYANIDES	Calcium ferrocyanide	538
	Potassium ferrocyanide	536
	Sodium ferrocyanide	535
TARTRATES	Potassium sodium L(+)-tartrate	337
	Sodium L(+)-tartrate	335(ii)
	L(+)-Tartaric acid	334
ETHYLENE DIAMINE TETRA ACETATES	Calcium disodium ethylenediaminetetraacetate	385
	Disodium ethylenediaminetetraacetate	386
[52]**[SORBITAN ESTERS OF FATTY ACIDS**		
	Sorbitan monolaurate	493
	Sorbitan monooleate	494
	Sorbitan monopalmitate	495
	Sorbitan monostearate	491
	Sorbitan tristearate	492]

Note No.	Notes to the Food Additives mentioned in the Table 1 to 15.
1	As adipic acid.
2	On the dry ingredient, dry weight, dry mix or concentrate basis.
3	For use in surface treatment only.
4	For use in decoration, stamping, marking or branding the product only.
5	Excluding products conforming to the standard for jams, jellies and marmalades
6	As aluminium.
7	For use in coffee substitutes only.
8	As bixin.
9	Except for use in ready-to-drink coffee products at 10,000 mg/kg.
10	As ascorbyl stearate.
11	On the flour basis.
12	As a result of carryover from flavouring substances.
13	As benzoic acid.
14	For use in hydrolysed protein liquid formula only.
15	On the fat or oil basis.
16	For use in glaze, coatings or decorations for fruit, vegetables, meat or fish only.
18	As added level; residue not detected in ready-to-eat food.

19	For use in cocoa fat only.
20	Singly or in combination with other stabilizers, thickeners and/or gums.
21	As anhydrous calcium disodium ethylenediaminetetraacetate.
22	For use in smoked fish products only.
23	As iron.
24	As anhydrous sodium ferrocyanide.
25	For use at GMP in full fat soy flour only.
26	As steviol equivalents.
27	As para-hydroxybenzoic acid.
28	Except for use in wheat flour conforming to the standard for wheat flour at 2,000 mg/kg.
29	For non-standardized food only.
30	As residual NO_3 ion.
31	On the mash used basis.
32	As residual NO_2 ion.
33	As phosphorus.
34	On the anhydrous basis.
35	For use in cloudy juices only.
36	On the residual level basis.
37	For non-standardized food and food conforming to the standard for quick frozen blocks of fish fillets, minced fish flesh and mixtures of fillets and minced fish flesh.
38	On the creaming mixture basis.
39	For use in products containing butter or other fats and oils only.
40	Pentasodium triphosphate (INS 451(i)) only, to enhance the effectiveness of benzoates and sorbates.
41	For use in breading or batter coatings only.
42	As sorbic acid.
43	As tin.
44	As residual SO_2.
45	As tartaric acid.
46	As thiodipropionic acid.
47	On the dry egg yolk weight basis.
48	For use in olives only.
49	For use on citrus fruits only.
50	For use in fish roe only.
51	For use in herbs only.
52	Excluding chocolate milk.
53	For use in coatings only.
54	For use in cocktail cherries and candied cherries only.
55	Within the limits for sodium, calcium, and potassium specified in the standard for infant formulaand formula for special dietary purposes intended for infants: singly or in combination with other sodium, calcium, and/or potassium salts.
56	Excluding products where starch is present.

57	GMP is 1 part benzoyl peroxide and not more than 6 parts of the subject additive by weight.
58	As calcium.
59	For use as a packaging gas only.
60	Except for use as a carbonating agent: the CO_2 in the finished wine shall not exceed 39.2 mg/kg.
61	For use in minced fish only.
62	As copper.
63	For non-standardized food and breaded or batter coatings in food conforming to the standard for quick frozen fish sticks (fish fingers), fish portions and fish fillets – breaded or in batter
64	For use in dry beans only.
65	As a result of carryover from nutrient preparations.
66	As formaldehyde.
67	Except for use in liquid egg whites at 8,800 mg/kg as phosphorus, and in liquid whole eggs at 14,700 mg/kg as phosphorus.
68	For use in products with no added sugar only.
69	For use as a carbonating agent only.
70	As the acid.
71	Calcium, potassium and sodium salts only.
72	On the ready-to-eat basis.
73	Excluding whole fish.
74	Excluding liquid whey and whey products used as ingredients in infant formula.
75	For use in milk powder for vending machines only.
76	For use in potatoes only.
77	For special nutritional uses only.
78	Except for use in pickling and balsamic vinegars at 50,000 mg/kg.
79	For use on nuts only.
80	Equivalent to 2 mg/dm^2 surface application to a maximum depth of 5 mm.
81	Equivalent to 1 mg/dm^2 surface application to a maximum depth of 5 mm.
82	Except for use in shrimp (Crangon crangon and Crangon vulgaris) at 6,000 mg/kg.
83	L(+)-form only.
84	For use in products for infants over 1 year of age only.
85	Use level in sausage casings; residue in sausage prepared with such casings should not exceed 100 mg/kg.
86	For use in whipped dessert toppings other than cream only.
87	On the treatment level basis.
88	As a result of carryover from the ingredient.
89	For use in sandwich spreads only.
90	For use in milk-sucrose mixtures used in the finished product only.
91	Singly or in combination: benzoates and sorbates.
92	Excluding tomato-based sauces.

93	Excluding natural wine produced from Vitis vinifera grapes.
94	For use in loganiza (fresh, uncured sausage) only.
95	For use in surimi and fish roe products only.
96	On the dried weight basis of the high intensity sweetener.
97	On the final cocoa and chocolate product basis.
98	For use in dust control only.
99	For use in fish fillets and minced fish only.
100	For use in crystalline products and sugar toppings only.
101	When used in combination with other emulsifiers, total combined use level not to exceed 15,000 mg/kg as specified in the standard for chocolate and chocolate products.
102	For use in fat emulsions for baking purposes only.
103	Except for use in special white wines at 400 mg/kg.
104	Except for use in bread and yeast-leavened bakery products: maximum 5,000 mg/kg residue.
105	Except for use in dried gourd strips at 5,000 mg/kg.
106	Except for use in Dijon mustard at 500 mg/kg.
107	Except for use of sodium ferrocyanide (INS 535) and potassium ferrocyanide (INS 536) in foodgrade dendridic salt at 29 mg/kg as anhydrous sodium ferrocyanide.
108	For use on coffee beans only.
109	Use level reported as 25 lbs/1,000 gal x (0.45 kg/lb) x (1 gal/3.75 L) x (1 L/kg) x (10E6 mg/kg) = 3,000 mg/kg
110	For use in frozen French fried potatoes only.
111	Except for use in dried glucose syrup used in the manufacture of sugar confectionery at 150 mg/kg and glucose syrup used in the manufacture of sugar confectionery at 400 mg/kg.
112	For use in grated cheese only.
113	As acesulfame potassium equivalents (the reported maximum level can be converted to an aspartame-acesulfame salt basis by dividing by 0.44). Combined use of aspartame-acesulfame salt with individual acesulfame potassium or aspartame should not exceed the individual maximum levels for acesulfame potassium or aspartame (the reported maximum level can be converted to aspartame equivalents by dividing by 0.68).
114	Excluding cocoa powder.
115	For use in pineapple juice only.
116	For use in doughs only.
117	Except for use in fresh, uncured sausage at 1,000 mg/kg.
118	Except for use in fresh, cured sausage at 1,000 mg/kg.
119	As aspartame equivalents (the reported maximum level can be converted to an aspartame acesulfame salt basis by dividing by 0.64). Combined use of aspartame-acesulfame salt with individual aspartame or acesulfame potassium should not exceed the individual maximum levels for aspartame or acesulfame potassium (the

	reported maximum level can be converted to acesulfame potassium equivalents by multiplying by 0.68).
120	Except for use in caviar at 2,500 mg/kg.
121	Except for use in fermented fish products at 1,000 mg/kg.
123	Except for use in beverages with pH greater than 3.5 at 1,000 mg/kg.
124	For use in products containing less than 7% ethanol only.
125	For use in a mixture with vegetable oil only, as a release agent for baking pans.
126	For use in releasing dough in dividing or baking only.
127	On the served to the consumer basis.
128	Tartaric acid (INS 334) only.
129	For use as an acidity regulator in grape juice only.
130	Singly or in combination: butylated hydroxyanisole (INS 320), butylated hydroxytoluene (INS 321), tertiary butylated hydroquinone (INS 319), and propyl gallate (INS 310).
131	For use as a flavour carrier only.
132	Except for use in semi-frozen beverages at 130 mg/kg on a dried basis.
133	Any combination of butylated hydroxyanisole (INS 320), butylated hydroxytoluene (INS 321), and propyl gallate (INS 310) at 200 mg/kg, provided that single use limits are not exceeded.
134	Except for use in cereal-based puddings at 500 mg/kg.
135	Except for use in dried apricots at 2,000 mg/kg, bleached raisins at 1,500 mg/kg, desiccated coconut at 200 mg/kg and coconut from which oil has been partially extracted at 50 mg/kg.
136	For use to prevent browning of certain light coloured vegetables only.
137	Except for use in frozen avocado at 300 mg/kg.
138	For use in energy-reduced products only.
139	For use in mollusks, crustaceans, and echinoderms only.
140	Except for use in canned abalone (univalve hydrolyse) at 1,000 mg/kg.
141	For use in white chocolate only.
142	Excluding coffee and tea.
143	For use in fruit juice-based drinks and dry ginger ale only.
144	For use in sweet and sour products only.
145	For use in energy reduced or no added sugar products only.
146	Beta-carotene (synthetic) (INS 160a(i)) only.
147	Excluding whey powders for infant food.
148	Except for use in microsweets and breath freshening mints at 10,000 mg/kg.
149	Except for use in fish roe at 100 mg/kg.
150	For use in soy-based formula only.
151	Except for use in hydrolysed protein and/or amino acid-based formula at 1,000 mg/kg.
152	For use in frying only.
153	For use in instant noodles only.
154	For use in coconut milk only.

155	For use in frozen, sliced apples only.
156	Except for use in microsweets and breath freshening mints at 2,500 mg/kg.
157	Except for use in microsweets and breath freshening mints at 2,000 mg/kg.
158	Except for use in microsweets and breath freshening mints at 1,000 mg/kg.
159	For use in pancake syrup and maple syrup only.
160	For use in ready-to-drink products and pre-mixes for ready-to-drink products only.
162	For use in dehydrated products and salami-type products only.
163	Except for use in microsweets and breath freshening mints at 3,000 mg/kg.
164	Except for use in microsweets and breath freshening mints at 30,000 mg/kg.
165	For use in products for special nutritional use only.
166	For use in milk-based sandwich spreads only.
167	For use in dehydrated products only.
168	Quillaia extract type 1 (INS 999(i)) only.
169	For use in fat-based sandwich spreads only.
170	Excluding products conforming to the standard for fermented milks.
171	Excluding anhydrous milkfat.
172	Except for use in fruit sauces, fruit toppings, coconut cream, coconut milk and "fruit bars" at 50 mg/kg.
173	Excluding instant noodles containing vegetables and eggs.
174	Singly or in combination: sodium aluminosilicate (INS 554), calcium aluminium silicate (INS 556),and aluminium silicate (INS 559).
175	Except for use in jelly-type fruit-based desserts at 200 mg/kg.
176	For use in canned liquid coffee only.
177	For non-standardized food and minced fish flesh and breaded or batter coatings conforming to the standard for quick frozen fish sticks (fish fingers), fish portions and fish fillets –breaded or in batter .
178	As carminic acid.
179	For use in restoring the natural colour lost in processing only.
180	Singly or in combination: butylated hydroxyanisole (BHA, INS 320) and butylated hydroxytoluene (BHT, INS 321).
181	As anthocyanin.
182	Excluding coconut milk.
183	Products conforming to the standard for chocolate and chocolate products may only use colours for surface decoration.
184	For use in nutrient coated rice grain premixes only.
185	As norbixin.
186	For use in flours with additives only.
187	Ascorbyl palmitate (INS 304) only.
188	If used in combination with aspartame-acesulfame salt (INS 962), the combined maximum use level, expressed as acesulfame potassium, should not exceed this level.
189	Excluding rolled oats.
190	Except for use in fermented milk drinks at 500 mg/kg.

191	If used in combination with aspartame-acesulfame salt (INS 962), the combined maximum use level, expressed as aspartame, should not exceed this level.
192	For use in liquid products only.
193	For use in crustacean and fish pastes only.
194	For use in instant noodles conforming to the standard for instant noodles only.
195	Singly or in combination: butylated hydroxyanisole (BHA, INS 320), butylated hydroxytoluene (BHT, INS 321) and tertiary butylhydroquinone (TBHQ, INS 319).
196	Singly or in combination: butylated hydroxyanisole (BHA, INS 320), butylated hydroxytoluene (BHT, INS 321) and ropyl gallate (INS 310).
197	Singly or in combination: butylated hydroxytoluene (BHT, INS 321) and propyl gallate (INS 310).
198	For use in solid products (e.g., energy, meal replacement or fortified bars) only.
199	Except for use in microsweets and breath freshening mints at 6,000 mg/kg as steviol equivalents.
200	Except for use in ham of pork loin (cured and non-heat-treated) at 120 mg/kg as steviol equivalents
201	For use in flavoured products only.
202	For use in brine used in the production of sausage only.
203	For use in chewable supplements only.
204	Except for use in longan and lichee at 50 mg/kg.
205	Except for use to prevent browning of certain light colored vegetables at 50 mg/kg.
206	Except for use as a bleaching agent in products conforming to the standard for aqueous coconut products at 30 mg/kg.
207	Except for use in soybean sauce intended for further processing at 50,000 mg/kg.
208	For use in dried and dehydrated products only.
209	Excluding products conforming to the standard for blend of skimmed milk and vegetable fat in powdered form.
210	For non-standardized food and fish filets and minced fish flesh conforming to the standard for quick frozen fish sticks (fish fingers), fish portions and fish fillets – breaded or in batter.
211	For use in noodles only.
212	Except for use in products conforming to the standard for bouillon and consommés at 3,000 mg/kg.
213	For use in liquid products containing high intensity sweeteners only.
214	Excluding products conforming to the standard for dairy fat spreads.
215	Excluding products conforming to the standard for fat spreads and blended spreads.
216	For use in maize-based products only.
217	Except for use in toppings at 300 mg/kg.
218	Only hydrolyse can be used as preservatives and antioxidants in the products covered by the standard for desiccated coconut.
219	Except for use in non-alcoholic aniseed-based, coconut-based, and almond-based drinks at 5,000 mg/kg.
220	For use in flavoured products heat treated after fermentation only.

221	For use in potato dough and pre-fried potato slices only.
222	For use in collagen-based casings with a water activity greater than 0.6 only.
223	Except for use in products containing added fruits, vegetables, or meats at 3,000 mg/kg.
224	Excluding aromatized beer.
225	Except for use in self-raising flour at 12,000 mg/kg.
226	Except for use as a meat tenderizer at 35,000 mg/kg.
227	For use in sterilized and UHT treated milks only.
228	Except for use to stabilize higher protein liquid whey used for further processing into whey protein concentrates at 1,320 mg/kg.
229	For use as a flour treatment agent, raising agent or leavening agent only.
230	For use as an acidity regulator only.
231	For use in flavoured fermented milks and flavoured fermented milks heat treated after fermentation only.
232	For use in vegetable fats conforming to the standard for edible fats and oils not covered by individual standards only.
233	As nisin.
234	For use as a stabilizer or thickener only.
235	For use in reconstituted and recombined products only.
236	Excluding products conforming to the standard for cream and prepared creams (reconstituted cream, recombined cream, prepackaged liquid cream).
237	Excluding products conforming to the standard for processed cereal-based foods for infants and young children
238	Except for use in products corresponding to the standard for processed cereal-based foods for infants and young children) at GMP.
239	Excluding products conforming to the standard for canned baby foods.
240	The use level is within the limit for sodium listed in the standard for canned baby foods
241	For use in surimi products only.
242	For use as an antioxidant only.
243	For use in products conforming to the standard for processed cereal-based foods for infants and young children only, as a raising agent.
244	For use in biscuit dough only.
245	For use in pickled vegetables only.
246	Singly or in combination: aluminium ammonium hydrolys (INS 523) and sodium aluminium phosphates (acidic and basic; (INS 541(i),(ii)).
247	For use in kuzukiri and harusame (starch based products) only.
248	For use as a raising agent only.
249	For use as a raising agent in mixes for steamed breads and buns only.
250	For use in boiled mollusks and tsukudani only.
251	For use in processed hydrolys cheese only.
252	For use in self-rising flour and self-rising corn meal only.
253	For use in dry mix hot chocolate only.

254	For use in salt applied to dry salted cheeses during manufacturing only.
255	Except for use in seasonings applied to foods in food category 15.1 at 1,700 mg/kg.
256	For use in noodles, gluten-free pasta and pasta intended for hypoproteic diets only.
257	For use in shrimps and prawns only.
258	Excluding maple syrup.
259	Singly or in combination: sodium aluminosilicate (INS 554) and calcium aluminium silicate (INS 556).
260	For use in powdered beverage whiteners only.
261	For use in heat-treated buttermilk only.
262	For use in edible fungi and fungus products only.
263	Except for use in pickled fungi at 20,000 mg/kg.
264	Except for use in sterilized fungi at 5,000 mg/kg: citric acid (INS 330) and lactic acid (INS 270),singly or in combination.
265	For use in quick frozen French fried potatoes only, as a sequestrant.
266	Excluding salted atlantic herring and sprat.
267	Excluding products conforming to the standard for salted fish and dried salted fish of the gadidae family of fishes , the standard for dried shark fins, the standard for crackers from marine and freshwater fish, crustaceans and molluscan shellfish , and the standard for boiled dried salted anchovies.
268	Singly or in combination: ins 471, 472a, 472b and 472c in products conforming to the standard forprocessed cereal-based foods for infants and young children.
269	Singly or in combination with other modified starches used as thickeners in products conforming to the standard for processed cereal-based foods for infants and young children.
270	For use at 60,000 mg/kg, singly or in combination with other starch thickeners in products conforming to the standard for canned baby foods.
271	For use in products conforming to the standard for canned baby foods.
272	Singly or in combination: ins 410, 412, 414, 415 and 440 at 20,000 mg/kg in gluten-free cereal based foods, and 10,000 mg/kg in other products conforming to the standard for processed cereal- based foods for infants and young children .
273	Singly or in combination: ins 410, 412, 414, 415 and 440 except for use at 20,000 mg/kg in glutenfree cereal based foods in products conforming to the standard for processed cereal-based foods for infants and young children .
274	For use at 15,000 mg/kg in products conforming to the standard for processed cereal-based foods for infants and young children.
275	For use at 1,500 mg/kg in products conforming to the standard for canned baby foods.
276	Singly or in combination with other modified starches used as thickeners in products conforming to the standard for canned baby foods.
277	Excluding virgin and cold pressed oils and products conforming to the standard for olive oils and olive pomace oils.
278	For use in whipped cream and cream packed under pressure only.

279	Except for products conforming to the standard for edible fungi and fungus products.
280	For use in pickled radish only.
281	For use in fresh minced meat which contains other ingredients apart from comminuted meat only.
282	Only non-amidated pectins may be used in the standard for canned baby foods
283	For use in canned fruit-based baby foods conforming to the standard for canned baby foods only.
284	Singly or in combination: INS 1412, 1413, 1414 and 1440 in products conforming to the standard for infant formula and formulas for special medical purposes intended for infants.
285	Singly or in combination: INS 1412, 1413, 1414 and 1422 in products conforming to the standardfor follow-up formula.
286	For use in products conforming to the standard for luncheon meat andthe standard for cooked cured chopped meat.
288	For use in products conforming to the standard for cooked cured ham and cooked cured pork shoulder.
289	For use of sodium dihydrogen phosphate (INS 339(i)), disodium hydrogen phosphate (INS 339(ii)),trisodium phosphate (INS 339(iii)), potassium dihydrogen phosphate (INS 340(i)), dipotassium hydrogen phosphate (INS 340(ii)), tripotassium phosphate (INS 340(iii)), calcium dihydrogen phosphate (INS 341(i)), calcium hydrogen phosphate (INS 341(ii)), tricalcium phosphate (INS 341(iii), disodium diphosphate (INS 450(i)), trisodium diphosphate (INS 450(ii)), tetrasodium diphosphate (INS 450(iii)), tetrapotassium diphosphate (INS 450(v)), calcium dihydrogen diphosphate (INS 450(vii)), pentasodium triphosphate (INS 451(i)), pentapotassium triphosphate (INS 451(ii)), sodium polyphosphate (INS 452(i)), potassium polyphosphate (INS 452(ii)), sodium calcium polyphosphate (INS 452(iii)), calcium polyphosphate (INS 452(iv)), ammonium polyphosphate (INS 452(v)), and bone phosphate (INS 542) as humectants in products conforming to the standard for cooked cured ham and cooked cured pork shoulder . The total amount of phosphates (naturally present and added) shall not exceed 3,520 mg/kg as phosphorus.
290	For use in products conforming to the standard for luncheon meat and cooked cured chopped meat at 15 mg/kg to replace loss of colour in product with binders only.
291	Except for use of beta-apo-8'-carotenal (INS 160e) and beta-apo-8'-carotenoic acid, methyl or ethyl ester (INS 160f) at 35 mg/kg.
292	Except for use in hydrolysed protein and/or amino acid-based formula at 25,000 mg/kg.
293	On the saponin basis.
294	Except for use in liquid products at 600 mg/kg as steviol equivalents.
295	For use in products conforming to the standard for canned baby foods only, as an acidity regulator.

296	Except for use in perilla in brine at 780 mg/kg.
297	The level in the ready-to-eat food shall not exceed 200 mg/kg on the anhydrous basis.
298	For use in provolone cheese only.
299	For use at 400 mg/kg as phosphorous singly or in combination in breaded or batter coating inaccordance with standard for quick frozen fish sticks (fish fingers), fish portions and fish fillets– breaded or in batter.
300	For use in salted squid only.
301	Interim maximum level.
302	For use of sodium dihydrogen phosphate (INS 339(i)), disodium hydrogen phosphate (INS 339(ii),trisodium phosphate (INS 339(iii)), potassium dihydrogen phosphate (INS 340(i)), dipotassium hydrogen phosphate (INS 340(ii)), tripotassium phosphate (INS 340(iii)), calcium dihydrogen phosphate (341(i)), calcium hydrogen phosphate (INS 341(ii)), tricalcium phosphate (INS 341(iii)), disodium diphosphate (INS 450(i)), trisodium diphosphate (INS 450(ii)), tetrasodium diphosphate(INS 450(iii)), tetrapotassium diphosphate (INS 450(v)), calcium dihydrogen diphosphate (INS 450(vii)), pentasodium triphosphate (INS 451(i)), pentapotassium triphosphate (INS 451(ii)), sodium polyphosphate (INS 452(i)), potassium polyphosphate (INS 452(ii)), sodium calcium polyphosphate (INS 452(iii)), calcium polyphosphate (INS 452(iv)), ammonium polyphosphate (INS 452(v)), and bone phosphate (INS 542) as humectants in products conforming to the standard for luncheon meat and cooked cured chopped meat at 1320 mg/kg as phosphorous. The total amount of phosphates (naturally present and added) shall not exceed 3,520 mg/kg as phosphorous.
303	For use as a pH stabilizer in soured cream butter only.
321	For use in powdered mixes only.
327	For use in fish products cooked in soy sauce.
330	Except for use in canned products.
340	Except for products not conforming to the Codex standard for bouillons and consommés (CODEX STAN 117-1981) at 100 mg/kg.
[69][408	Only for bakery shortening]
FS01	Glucose oxidase from Aspergillus niger, A. oryzae, Penicillium chrysogenum
FS02	Lipase from Aspergillus niger, A. oryzae, A. flavus, Rhizopus arrhizus, R. delemar, R. nigricans, R. niveus, Mucor javanicus, M. miehei, M. pusillus, Brevibacterium lineus, Candida lipolytica
FS03	Xylanase from Aspergillus niger, Sporotrichum dimorphosporum, Streptomyces sp., Trichoderma reesei, Humicola insolens, Bacillus licheniformis
[31][FS04a	Lactic acids, L(-) or DL malic acid and L(+) tartaric and citric acids can be only be added to musts under condition that the initial acidity content is not raised by more than 54 meq/l (i.e. 4 gm/l expressed in tartaric acid)].
[70][FS04b	For use in pre-packed coconut water only.]
XS89	Excluding products conforming to standard for luncheon meat.

XS96	Excluding products conforming to the standard for cooked cured ham.
XS97	Excluding products conforming to the standard for cooked cured pork shoulder.
XS98	Excluding products conforming to the standard for cooked cured chopped meat.
[73][XS243	Excluding products conforming to the standard for fermented milks]
XT99	In case of thermally processed fruit beverages/ fruit drinks/ready-to-serve fruit beverages, half of the recommended maxiumum level is permitted
XT100	70 mg/kg for thermally processed fruit beverages/ fruit drinks/ready-to- serve fruit beverages
XT101	300 mg/kg for thermally processed fruit beverages/ fruit drinks/ready-to- serve fruit beverages
XT102	On dilution except in cordial and barley water
[52][323	For use as firming agent
348	Singly or in combination: Sucrose esters of fatty acids (INS 473), sucrose oligoesters, type and type II (INS 473a) and sucroglycerides (INS 474)
359	Excluding dairy fat spreads with ≥ 70% milk fat content
360	In dairy fat spreads limited to products with < 70% fat content or baking purposes only.
363	For use at 50,000 mg/kg for emulsified oils used in the production of noodles or bakery products.
366	10,000 mg/kg in imitation chocolate with >5% water content.
367	For use at 10,000 mg/kg in candy containing not less than 10% oil
368	For use at 10,000 mg/kg in whipped decorations
389	Except for use at 500 mg/kg in products containing nut paste
XS 86	Excluding products conforming to the Standard for Cocoa Butter
XS 87	Excluding products conforming to the Standard for Chocolate and Chocolate Products
XS 105	Excluding products conforming to the Standard for Cocoa Powders (Cocoas) and Dry Mixtures of Cocoa and Sugars
XS141	Excluding products conforming to the Standard for Cocoa (Cacao) Mass (Cocoa/chocolate liquor) and Cocoa Cake
XS240	Excluding products conforming to the Standard for Aqueous Coconut Products
XS314R	Excluding products conforming to the Standard for Date Paste]

GMP Table Provisions For all Food Categories	
The following additives, as indicated may be used in all food categories (except those categories listed in the 'Annex to GMP' list) under the conditions of Good Manufacturing Practice (GMP) as outlined in the 3.1(8)	
INS No.	**Food Additive**
260	Acetic acid, glacial
472a	Acetic and fatty acid esters of glycerol

1422	Acetylated distarch adipate
1414	Acetylated distarch phosphate
1451	Acetylated oxidized starch
1401	Acid-treated starch
406	Agar
400	Alginic acid
1402	Alkaline treated starch
403	Ammonium alginate
503(i)	Ammonium carbonate
510	Ammonium chloride
503(ii)	Ammonium hydrogen carbonate
527	Ammonium hydroxide
1100(i)	alpha-Amylase from Aspergillus oryzae var.
1100(iv)	alpha-Amylase from Bacillus megaterium expressed in Bacillus subtilis
1100(v)	alpha-Amylase from Bacillus stearothermophilus expressed in Bacillus subtilis
1100(ii)	alpha-Amylase from Bacillus stearothermophilus
1100(iii)	alpha-Amylase from Bacillus subtilis
300	Ascorbic acid, L-
162	Beet red
1403	Bleached starch
1101(iii)	Bromelain
629	Calcium 5'-guanylate
633	Calcium 5'-inosinate
634	Calcium 5'-ribonucleotides
263	Calcium acetate
404	Calcium alginate
302	Calcium ascorbate
170(i)	Calcium carbonate
509	Calcium chloride
623	Calcium di-L-glutamate
578	Calcium gluconate
526	Calcium hydroxide
327	Calcium lactate
352(ii)	Calcium malate, DL-
529	Calcium oxide
282	Calcium propionate
552	Calcium silicate
516	Calcium sulfate
150a	Caramel I – plain caramel
1100(vi)	Carbohydrase from Bacillus licheniformis
290	Carbon dioxide

410	Carob bean gum
407	Carrageenan
427	Cassia gum
140	Chlorophylls
330	Citric acid
472c	Citric and fatty acid esters of glycerol
468	Cross-linked sodium carboxymethyl cellulose (Cross-linked-cellulose gum)
424	Curdlan
457	Cyclodextrin, alpha-
458	Cyclodextrin, gamma-
1504(i)	Cyclotetraglucose
1504(ii)	Cyclotetraglucose syrup
1400	Dextrins, roasted starch
628	Dipotassium 5'-guanylate
627	Disodium 5'-guanylate
631	Disodium 5'-inosinate
635	Disodium 5'-ribonucleotides
1412	Distarch phosphate
315	Erythorbic acid (Isoascorbic acid)
968	Erythritol
462	Ethyl cellulose
467	Ethyl hydroxyethyl cellulose
297	Fumaric acid
418	Gellan gum
575	Glucono delta-lactone
1102	Glucose oxidase (Note FS01)
620	Glutamic acid, L(+)-
422	Glycerol
626	Guanylic acid, 5'-
412	Guar gum
414	Gum arabic (Acacia gum)
507	Hydrochloric acid
463	Hydroxypropyl cellulose
1442	Hydroxypropyl distarch phosphate
464	Hydroxypropyl methyl cellulose
1440	Hydroxypropyl starch
630	Inosinic acid, 5'-
953	Isomalt (Hydrogenated isomaltulose)
416	Karaya gum
425	Konjac flour
270	Lactic acid, L-, D- and DL-
472b	Lactic and fatty acid esters of glycerol

966	Lactitol
322(i), (ii)	Lecithins
1104	Lipases (Note FS02)
160d(iii)	Lycopene, Blakeslea trispora
160d(i)	Lycopene, synthetic
160d(ii)	Lycopene, tomato
504(i)	Magnesium carbonate
511	Magnesium chloride
625	Magnesium di-L-glutamate
580	Magnesium gluconate
528	Magnesium hydroxide
504(ii)	Magnesium hydroxide carbonate
329	Magnesium lactate, DL-
530	Magnesium oxide
553(i)	Magnesium silicate, synthetic
518	Magnesium sulfate
296	Malic acid, DL-
965(i)	Maltitol
965(ii)	Maltitol syrup
421	Mannitol
461	Methyl cellulose
465	Methyl ethyl cellulose
460(i)	Microcrystalline cellulose (Cellulose gel)
471	Mono- and di-glycerides of fatty acids
624	Monoammonium L-glutamate
622	Monopotassium L-glutamate
621	Monosodium L-glutamate
1410	Monostarch phosphate
941	Nitrogen
942	Nitrous oxide
1404	Oxidized starch
1101(ii)	Papain
440	Pectins
1413	Phosphated distarch phosphate
1200	Polydextroses
964	Polyglycitol syrup
1202	Polyvinylpyrrolidone, insoluble
632	Potassium 5’-inosinate
261	Potassium acetates
402	Potassium alginate
303	Potassium ascorbate
501(i)	Potassium carbonate

508	Potassium chloride
332(i)	Potassium dihydrogen citrate
577	Potassium gluconate
501(ii)	Potassium hydrogen carbonate
515(ii)	Potassium hydrogen sulfate
525	Potassium hydroxide
326	Potassium lactate
351(ii)	Potassium malate
283	Potassium propionate
515(i)	Potassium sulfate
460(ii)	Powdered cellulose
407a	Processed eucheuma seaweed
944	Propane
280	Propionic acid
1101(i)	Protease
1204	Pullulan
470(i)	Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium
470(ii)	Salts of oleic acid with calcium, potassium and sodium
551	Silicon dioxide, amorphous
350(ii)	Sodium DL-malate
262(i)	Sodium acetate
401	Sodium alginate
301	Sodium ascorbate
500(i)	Sodium carbonate
466	Carboxymethyl cellulose
469	Sodium carboxymethyl cellulose, enzymatically hydrolysed (Cellulose gum, enzymatically hydrolyzed)
331(i)	Sodium dihydrogen citrate
316	Sodium erythorbate (Sodium isoascorbate)
365	Sodium fumarates
576	Sodium gluconate
350(i)	Sodium hydrogen DL-malate
500(ii)	Sodium hydrogen carbonate
514(ii)	Sodium hydrogen sulfate
524	Sodium hydroxide
325	Sodium lactate
281	Sodium propionate
500(iii)	Sodium sesquicarbonate
514(i)	Sodium sulfate
420(i)	Sorbitol
420(ii)	Sorbitol syrup

1420	Starch acetate
1450	Starch sodium octenyl succinate
1405	Starches, enzyme treated
553(iii)	Talc
417	Tara gum
957	Thaumatin
171	Titanium dioxide
413	Tragacanth gum
1518	Triacetin
380	Triammonium citrate
333(iii)	Tricalcium citrate
332(ii)	Tripotassium citrate
331(iii)	Trisodium citrate
415	Xanthan gum
967	Xylitol

ANNEX TO GMP Table

Food Categories or Individual Food Items where GMP Table shall not apply

Sr. No	Category number	Food category
1.	1.1.1	Milk and buttermilk (plain) (excluding heat-treated buttermilk)
2.	1.1.1.1	Milk (plain)
3.	1.1.1.2	Buttermilk (plain)
4.	1.2	Fermented and renneted milk products (plain) excluding food category 1.1.2 (dairy based drinks)
5.	1.2.1	Fermented and renneted milk products (plain), excluding food category 1.1.2 (dairy-based drinks)
6.	1.2.1.1	Fermented milks (plain), not heat-treated after fermentation
7.	1.2.1.2	Fermented milks (plain), heat-treated after fermentation
8.	1.2.2	Renneted milk (plain)
9.	1.4.1	Pasteurized cream (plain)
10.	1.4.2	Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)
11.	1.6.3	Whey Cheese
12.	1.6.6	Whey protein cheese
13.	1.8.2	Dried whey and whey products, excluding whey cheese
14.	2.1	Fats and oils essentially free from water
15.	2.1.1	Butter oil, anhydrous milkfat, ghee
16.	2.1.2	Vegetable oils and fats
17.	2.1.3	Lard, tallow, fish oil, and other animal fats
18.	2.2.1	Butter

Sr. No	Category number	Food category
19.	4.1.1	Fresh fruit
20.	4.1.1.1	Untreated fresh fruit
21.	4.1.1.2	Surface-treated fresh fruit
22.	4.1.1.3	[52][Peeled or cut, minimally processed fruit]
23.	4.2.1	Fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes,and aloe vera), seaweeds, and nuts and seeds
24.	4.2.1.1	Untreated fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes [(including soybeans)], and aloe vera), seaweeds, and nuts and seeds
25.	4.2.1.2	Surface-treated fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds
26.	4.2.1.3	[52][Peeled, cut or shredded minimally processed vegetables ((including mushrooms and fungi, roots and tubers, fresh pulses and legumes, and aloe vera) sea weeds, nuts and seeds)]
27.	4.2.2.1	Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds
28.	4.2.2.7	Fermented vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweed products, excluding fermented soybean products of food categories 6.8.6, 6.8.7, 12.9.1, 12.9.2.1 and 12.9.2.3
29.	6.1	Whole, broken or flaked grain, including rice
30.	6.2	Flours and starches (including soybean powder)
31.	6.2.1	Flours
32.	6.2.2	Starches
33.	6.4.1	Fresh pastas and noodles and like products
34.	6.4.2	Dried pastas and noodles and like products

Sr. No	Category number	Food category
35.	8.1	Fresh meat, poultry, and game
36.	8.1.1	Fresh meat, poultry, and game, whole pieces or cuts
37.	8.1.2	Fresh meat, poultry, and game, comminuted
38.	9.1	Fresh fish and fish products, including molluscs, crustaceans and echinoderms
39.	9.1.1	Fresh fish
40.	9.1.2	Fresh mollusks, crustaceans, and echinoderms
41.	9.2	Processed fish and fish products, including molluscs, crustaceans and echinoderms
42.	9.2.1	Frozen fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms
43.	9.2.2	Frozen battered fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms
44.	9.2.3	Frozen minced and creamed fish products, including mollusks, crustaceans, and echinoderms
45.	9.2.4	Cooked and/or fried fish and fish products, including mollusks, crustaceans, and echinoderms
46.	9.2.4.1	Cooked fish and fish products
47.	9.2.4.2	Cooked mollusks, crustaceans, and echinoderms
48.	9.2.4.3	Fried fish and fish products, including mollusks, crustaceans, and echinoderms
49.	9.2.5	Smoked, dried, fermented, and/or salted fish and fish products, including mollusks, crustaceans, and echinoderms
50.	10.1	Fresh eggs
51.	10.2.1	Liquid egg products
52.	10.2.2	Frozen egg products
53.	11.1	Refined and raw sugars
54.	11.1.1	White sugar, dextrose anhydrous, dextrose monohydrate, fructose

Sr. No	Category number	Food category
55.	11.1.2	Powdered sugar, powdered dextrose
56.	11.1.3	Soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar
57.	11.1.3.1	Dried glucose syrup used to manufacture sugar confectionery
58.	11.1.3.2	Glucose syrup used to manufacture sugar confectionery
59.	11.1.4	Lactose
60.	11.1.5	Plantation or mill white sugar
[52][60A	11.1.6	Gur or Jaggery
60B	11.1.6.1	Cane Jaggery/Gur
60C	11.1.6.2	Palm Jaggery/Gur
60D	11.1.6.3	Date Jaggery/Gur]
61.	11.2	Brown sugar, excluding products of food category 11.1.3 (soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar)
62.	11.3	Sugar solutions and syrups, also (partially) inverted, including treacle and molasses, excluding products of food category 11.1.3 (soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar)
63.	11.4	Other sugars and syrups (e.g., xylose, maple syrup, sugar toppings)
64.	11.5	Honey
65.	12.1	Salt and salt substitutes
66.	12.1.1	Salt
67.	12.1.2	Salt substitutes
68.	12.2.1	Herbs and spices (EXCLUDING SPICES)
69.	14.1.1	Waters

Sr. No	Category number	Food category
70.	14.1.1.1	Natural mineral waters and source waters
71.	14.1.1.2	Table waters and soda waters
72.	14.1.2	Fruit and vegetable juices
73.	14.1.2.1	Fruit juice
74.	14.1.2.2	Vegetable juice
75.	14.1.2.3	Concentrates for fruit juice
76.	14.1.2.4	Concentrates for vegetable juice
77.	14.1.3	Fruit and vegetable nectars
78.	14.1.3.1	Fruit nectar
79.	14.1.3.2	Vegetable nectar
80.	14.1.3.3	Concentrates for fruit nectar
81.	14.1.3.4	Concentrates for vegetable nectar
82.	14.1.5	Coffee, coffee substitutes, tea, herbal infusions, and other hot cereal beverages, excluding cocoa
83.	14.2.3	Grape wines
84.	14.2.3.1	Still grape wine
85.	14.2.3.2	Sparkling and semi-sparkling grape wines
86.	14.2.3.3	Fortified grape wine, grape liquor wine, and sweet grape wine]

APPENDIX B: Microbiological Requirements:

[28][**Table 1A**

Microbiological Requirements for Fish and Fishery products -Hygiene Indicator Organisms

Sl. No.	**Product Category***	**Aerobic Plate Count**				**Coagulase positive Staphylococci**				**Yeast &mold count**				**Stage where criterion applies**	**Action in case of unsatisfactory results**
		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)			
		n	c	m	M	n	c	m	M	n	c	m	M		
1.	Chilled/Frozen Finfish	5	3	$5x10^5$	$1x10^7$	-	-	-	-	-	-	-	-	After Chilling/Freezing.	Improvement in hygiene; Time-Temperature Control along value chain
2.	Chilled/Frozen Crustaceans	5	3	$1x10^6$	$1x10^7$	-	-	-	-	-	-	-	-	After Chilling/Freezing	Improvement in hygiene; Time-Temperature Control along value chain
3.	Chilled/Frozen Cephalopods	5	2	$1x10^5$	$1x10^6$	-	-	-	-	-	-	-	-	After Chilling/Freezing	Improvement in hygiene; Time-Temperature Control along value chain
4.	Live Bivalve Molluscs[#]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

5.	Chilled/Frozen Bivalves	5	2	$1x10^5$	$1x10^6$	-		-	-	-	-	-	-	After Chilling/Freezing	Improvement in hygiene; Time-Temperature Control along value chain
6.	Frozen Cooked Crustaceans/Frozen Heat Shucked Mollusc	5	2	$1x10^5$	$1x10^6$	5	2	$1x10^2$	$1x10^3$	-	-	-	-	End of Manufacturing process	Improvement in hygiene; Selection of raw material; Time-Temperature Control along value chain; process control
7.	Dried/Salted and Dried Fishery Products	5	0	$1x10^5$		-	-	-	-	5	2	100	500	End of Manufacturing process	Improvement in hygiene; Selection of raw material; Adequate drying (water activity ≤ 0.78)
8.	Thermally Processed Fishery Products	Commercially Sterile**				-	-	-	-	-	-	-	-	End of Manufacturing process	Revalidation of thermal process
9.	Fermented Fishery Products	-	-	-	-	5	1	$1x10^2$	$1x10^3$	5	0	100		End of Manufacturing process	Improvement in hygiene; Selection of raw material
10.	Smoked Fishery Products	5	0	$1x10^5$		5	2	$1x10^2$	$1x10^3$	-	-	-	-	End of Manufacturing process	Improvement in hygiene; Time-Temperature Control along value chain

11.	Accelerated Freeze Dried Fishery Products	5	0	$1x10^4$		5	0	100		-	-	-	-	End of Manufacturing process	Selection of raw material: Improvement in hygiene; along value chain
12.	Fish Mince/Surimi and Analogues	5	2	$1x10^5$	$1x10^6$	5	2	$1x10^2$	$1x10^3$	-	-	-	-	End of Manufacturing process	Selection of raw material: Improvement in hygiene
13.	Fish Pickle	5	0	$1x10^3$		5	1	$1x10^2$	$1x10^3$	5	0	100		End of manufacturing process (before packing)	Improvement in hygiene; Control of pH/acidity, selection of ingredients
14.	Battered and Breaded Fishery Products	5	2	$1x10^5$	$1x10^7$	5	1	$1x10^2$	$1x10^3$	5	0	100		End of Manufacturing process	Improvement in hygiene; Time-Temperature Control
15.	Convenience Fishery Products	5	2	$1x10^3$	$1x10^4$	5	2	$1x10^2$	$1x10^3$	-	-	-		End of Manufacturing process	Improvement in hygiene; Time-Temperature control of batter mix
16.	Powdered Fish Based Products	5	2	$1x10^4$	$1x10^5$	5	2	1x10	$1x10^2$	5	0	100		End of Manufacturing process	Improvement in hygiene; Selection of raw material

	Test method	IS: 5402/ISO 4833	IS 5887 : Part 2 or IS 5887 Part 8 (Sec 1)/	IS:5403/ISO 21527	

			ISO : 6888-1 or IS 5887 Part 8 (Sec 2)/ISO 6888-2			

**Commercial sterility should be established as per APHA (2015). Canned Foods—Tests for Commercial Sterility. Compendium of Methods for the Microbiological Examination of Food.

No hygienic indicators are currently prescribed for the Live Bivalve Molluscs

Table 1B

Microbiological Requirements for Fish and Fishery products –Safety Indicator Organisms

Sl. No.	Product Category*	*Escherichia coli*				*Salmonella*				*Vibriocholerae* (O1 and O139)				*Listeria monocytogenes*				*Clostridium botulinum*			
		Sampling Plan		Limits (MPN/g)		Sampling Plan		Limits		Sampling Plan		Limits		Sampling Plan		Limits		Sampling Plan		Limits(MPN /g)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
1.	Chilled/Frozen Finfish	5	3	11	500	5	0	Absent/25g		5	0	Absent/25g		-	-	-	-	-	-	-	-
2.	Chilled/Frozen Crustaceans	5	3	11	500	5	0	Absent/25g		5	0	Absent/25g		-	-	-	-	-	-	-	-
3.	Chilled/frozen Cephalopods	5	0	20		5	0	Absent/25g		5	0	Absent/25g		-	-	-	-	-	-	-	-
4.	Live Bivalve Molluscs	5	1	230 /100g	700 /100g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	Chilled/Frozen Bivalves	5	0	46		10	0	Absent/25g		5	0	Absent/25g		-	-	-	-	-	-	-	-
6.	Frozen cooked crustaceans/Frozen heat shucked mollusca	5	2	1	10	5	0	Absent/25g		5	0	Absent/25g		5	0	Absent/25g		-	-	-	-
7.	Dried/ Salted and dried fishery products	5	0	20		5	0	Absent/25g		-	-	-	-	-	-	-	-	-	-	-	-
8.	Thermally processed fishery products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Absence of viable spores or vegetative cells of *Clostridium botulinum* and absence of botulinum toxin.			

9.	Fermented Fishery Products	5	2	4	40	10	0	Absent/25g	-	-	-	-	-	-	-	-	Absence of viable spores or vegetative cells of *Clostridium botulinum* and absence of botulinum toxin.			
10	Smoked fishery products	5	3	11	500	5	0	Absent/25g	5	0	Absent/25g		5	0	Absent/25g		-	-	-	-
11	Accelerated Freeze Dried Fishery Products	5	0	20		5	0	Absent/25g	5	0	Absent/25g		5	0	Absent/25g		-	-	-	-
12	Fish Mince/Surimi and analouges	5	0	20		5	0	Absent/25g	5	0	Absent/25g		5	0	Absent/25g		-	-	-	-
13.	Fish Pickle	5	0	20		5	0	Absent/25g	-	-	-	-	-	-	-	-	-	-	-	-
14.	Battered and Breaded fishery products	5	2	11	500	5	0	Absent/25 g	5	0	Absent/25g		5	5	Absent/25g		-	-	-	-

15.	Convenience fishery products	5	2	1	10	5	0	Absent/25 g	5	0	Absent/25g		5	0	Absent/25g		-	-	-	-
16.	Powered fish based products	-	-	-	-	5	0	Absent/25g	-	-	-	-	-	-	-	-	-	-	-	-
	Test Methods	IS: 5887 Part 1 or ISO 16649-2				IS: 5887 Part 3/ ISO 6579			*Vibrio*, Bacteriological Analytical Manual, Chapter 9. USFDA BAM Online, May, 2004				IS: 14988, Part 1&2/ISO 11290-1 &2				IS: 5887, Part 4 or ISO 17919			

Sampling Plan:

The terms n, c, m and M used in this standard have the following meaning:

n = Number of units comprising a sample.

c = Maximum allowable number of units having microbiological counts above m.

m = Microbiological limit that may be exceeded number of units c.

M = Microbiological limit that no sample unit may exceed.

Product Definitions:

(1) Chilled/Frozen Finfish includes clean and wholesome finfish, which are either in raw, chilled or frozen condition and handled in accordance with good manufacturing practices. Chilling is the process of cooling fish or fish products to a temperature approaching that of melting ice. Chilling can be achieved either by using ice, chilled water, ice slurries of both seawater and freshwater or refrigerated seawater. Similarly, freezing is the process which is sufficient enough to reduce the temperature of the whole product to a level low enough to preserve the inherent quality of the fish and that have been maintained at this low temperature during transportation, storage and distribution up to and including the time of final sale. Freezing process that is carried out in appropriate equipment 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 reached –18^{o}C (0^{o}F) or lower at the thermal centre after thermal stabilization.

(2) Chilled/Frozen Crustaceans includes clean, whole or peeled crustaceans (shrimp/prawn, crabs and lobster) which are either in raw, chilled or frozen condition and handled in accordance with good manufacturing practices.

(3) Chilled/Frozen Cephalopods includes cleaned, whole or de-skinned cephalopods (squid, cuttlefish and octopus) which are either in raw, chilled or frozen condition and handled in accordance with good manufacturing practices.

(4) Live Bivalve Molluscs includes Oyster, Clam, Mussel, Scallop, Abalone which are alive immediately prior to consumption. Presentation includes the shell. Live bivalve molluscs are harvested alive from a harvesting area either approved for direct human consumption or classified to permit harvesting for an approved method of purification, like relaying or depuration, prior to human consumption. Both relaying and depuration must be subject to appropriate controls implemented by the official agency having jurisdiction.

(5) Chilled/Frozen Bivalves includes clean, whole or shucked bivalves, which are live either in chilled or frozen condition and handled in accordance with good manufacturing practices. This product category includes filter feeding aquatic animals such as oysters, mussels, clams, cockles and scallops.

(6) Frozen cooked Crustaceans or Frozen heat shucked Mollusca means clean, whole or peeled crustaceans, which are cooked at a defined temperature and time and subsequently frozen. Cooking of crustaceans must be designed to eliminate six log reduction of most heat resistant vegetative bacteria i.e. *Listeria monocytogenes*. Frozen heat shucked mollusca includes bivalves where meat is removed from the shell by subjecting the animals to mild heat before shucking to relax the adductor muscle and subsequently frozen.

(7) Dried or Salted and Dried fishery Products means the product prepared from fresh or wholesome finfish or shellfish after drying with or without addition of salt. The fish shall be bled, gutted, beheaded, split or filleted and washed prior to salting and drying. Salt used to produce salted fish shall be clean, free from foreign matter, and has no visible signs of contamination with dirt, oil, bilge or other extraneous materials.

(8) Thermally Processed Fishery Products means the product obtained by application of heat or temperature for sufficient time to achieve commercial sterility in hermetically sealed containers.

(9) Fermented Fishery Products includes any fish product that has undergone degradative changes through enzymatic or microbiological activity either in presence or absence of salt. Non-traditional products manufactured by accelerated fermentation, acid ensilage and chemical hydrolysis also belong to this category.

(10) Smoked Fishery Products means fish or fishery product subjected to a process of treatment with smoke generated from smouldering wood or plant materials. Here the product category refers to hot smoked fish where fish is smoked at an appropriate combination of temperature and time sufficient to cause the complete coagulation of the proteins in the fish flesh.

(11) Accelerated Freeze dried Fishery Products means fish, shrimp or any fishery product subjected to rapid freezing, followed by drying under high vacuum so as to remove the water by sublimation to a final moisture content of less than two percent.

(12) Fish Mince/Surimi and analogues means comminuted, mechanically removed meat which have been separated from and are essentially free from bones, viscera and skin. Surimi is the stabilized myofibrillar proteins obtained from mechanically deboned fish flesh that is washed with water and blended with cryoprotectants. Surimi analogues are variety of imitation products produced from surimi with addition of ingredients and flavor.

(13) Fish Pickle means an oily, semi-solid product with spices and acidic taste obtained from maturation of partially fried fish with vinegar. It is produced by frying edible portions of fish, shrimp or mollusc, followed by partial cooking with spices, salt and oil and maturing for 1-3 days with added organic acids. The product is intended for direct human consumption as a seasoning, or condiment for food.

(14) Battered and Breaded Fishery Products include fish portions, fillets or mince coated with batter and/or breading. Batter means liquid preparation from ground cereals, spices, salt, sugar and other ingredients and/or additives for coating. Typical batter types are non-leavened batter and leavened batter. Breading means dry breadcrumbs or other dry preparations mainly from cereals with colourants and other ingredients used for the final coating of fishery products.

(15) Convenience Fishery Products are tertiary food products made of fish, which are in ready to eat form and also includes snack based items prepared from fish and fishery products meant for direct human consumption such as extruded fishery products, fried items namely fish wafers, crackers, fish cutlets, fish burgers and other such products. These products can be consumed directly after minimal handling and processing. This category includes Sous-vide cooked products, surimi-based products cooked (in-pack), pasteurized crab meat, pasteurized molluscs which are distributed as refrigerated, but meant for direct human consumption with minimal or no cooking.

(16) Powdered Fish based Products include the products which are prepared from finfish/shellfish or parts thereof, with or without other edible ingredients in powdered form, suitable for human consumption. These may be consumed directly or as supplements and also after hydration and this category includes powdered and dried fish products generally used as ingredients in food preparations such as fish soup powder, fish chutney powder, ready to use fish-mix, and such other food.]

[21][Table 2

Microbiological Standards for Milk and Milk Products

Table-2A Microbiological Standards for Milk and Milk Products –Process Hygiene Criteria

Sr. No.	Product Description[1]	Aerobic Plate Count				Coliform Count[4]				*Staphylococcus aureus* (Coagulase positive)				Yeast and Mold Count				*Escherichia coli*			
		Sampling Plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
1	Pasteurized/boiled Milk/ Flavored Milk	5	3	$3x10^4$/ ml	$5x 10^4$/ml	5	0	<10/ml	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	Pasteurized Cream	5	3	$5x10^4$/g	$7.5x10^4$ /g	5	0	<10/g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	Sterilized milk /UHT milk / Evaporated Milk	NA																			
4	Sterilized / UHT Cream	NA																			
5	Sweetened Condensed Milk	5	3	$5x10^2$/g	$1x10^3$/g	5	0	<10/g	NA	5	0	<10/g	NA	5	0	<10/g	NA	NA	NA	NA	NA
6	Pasteurized Butter[2]	5	3	$2.5x10^4$ /g	$5x10^4$/ g	5	2	10/g	20/g	5	2	10/g	50/g	5	3	20/g	50/g	5	0	Absent/ g	NA
7	Milk Powder ; SMP, Partly SMP ; Dairy Whitener ; Cream Powder ; Ice Cream Mix Powder ; Lactose ; Whey based Powder ;Butter Milk Powder ; Casein Powder[3]	5	2	$3x10^4$/g	$5x10^4$/ g	5	2	10/g	50/g	5	2	10/g	$1x10^2$/g	5	0	50/g	NA	NA	NA	NA	NA

Sr. No.	Product Description[1]	Aerobic Plate Count				Coliform Count[4]				*Staphylococcus aureus* (Coagulase positive)				Yeast and Mold Count				*Escherichia coli*			
		Sampling Plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
8	Infant Milk Food, Infant Formulae, Infant Milk Substitute[4]	5	2	$5x10^2$/g	$5x10^3$/g	NA	NA	NA	NA	5	0	<10/g	NA	5	0	<10/g	NA	NA	NA	NA	NA
	Follow Up Formula	5	2	$1x10^3$/g	$1x10^4$/g	10	0	<10/g	NA	5	0	<10/g	NA	5	0	<10/g	NA	10	0	Absent/g	NA
	Cereal Based Complimentary food																				
9	Ice Cream, Frozen Dessert, Milk Lolly, Ice Candy	5	3	$1x10^5$/g	$2x10^5$/g	5	3	10/g	$1x10^2$/g	5	2	10/g	$1x10^2$/g	NA	NA	NA	NA	5	0	Absent/g	NA
10	Processed Cheese/ Cheese Spread	5	2	$2.5x10^4$/g	$5x10^4$/g	5	0	<10/g	NA	5	0	<10/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
11	All other cheeses categories including fresh cheeses / Cheddar / Cottage /Soft /Semi Soft[5]	NA	NA	NA	NA	5	3	$1x10^2$/g	$5x10^2$/g	5	3	10/g	$1x10^2$/g	5	3	$1x10^2$/g	$5x10^2$/g	5	0	<10 /g	NA
12	Fermented Milk Products	NA	NA	NA	NA	5	2	10/g	$1x10^2$/g	5	2	10/g	$1x10^2$/g	5	3	50/g	$1x10^2$/g	5	0	Absent/g	NA
13	Paneer/ Chhana/ chhana based sweets	5	3	$1.5x10^5$/g	$3.5x10^5$/g	5	3	10/g	$1x10^2$/g	5	3	10/g	$1x10^2$/g	5	3	50/g	$1.5x10^2$/g	5	0	<10/g	NA
14	Khoa/ Khoa based sweets	5	3	$2.5x10^4$/g	$7.5x10^4$/g	5	2	50/g	$1x10^2$/g	5	3	10/g	$1x10^2$/g	5	3	10/g	50/g	5	0	<10/g	NA

Sr. No.	Product Description[1]	Aerobic Plate Count				Coliform Count[4]				*Staphylococcus aureus* (Coagulase positive)				Yeast and Mold Count				*Escherichia coli*			
		Sampling Plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
	Test Methods[7]	IS 5402/ ISO: 4833				5401 Part 1/ISO : 4832				IS 5887 : Part 2 or IS 5887 Part 8 (Sec 1)/ ISO : 6888-1 or IS 5887 Part 8 (Sec 2)/ ISO 6888-2				IS:5403 or ISO : 6611				IS 5887 : Part 1 or ISO : 16649-2			

Table-2B: Microbiological Standards for Milk and Milk Products – Food Safety Criteria

Sr. No	Product Description1	Salmonella sp.				*Listeria monocytogenes*				*Bacillus cereus*				Sulphite Reducing Clostridia				*Enterobacter sakazakii (Cronobacter sp.*			
		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
1	Pasteurized/boiled milk/ Flavored Milk	5	0	Absent/ 25 ml	NA	5	0	Absent/ 25ml	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	Pasteurized Cream	5	0	Absent/ 25g	NA	5	0	Absent/ 25g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	Sterilized milk /UHT milk / Evaporated Milk			Sterilized /UHT milk products shall comply with a test for commercial sterility as per IS: 4238 (Appendix C or Appendix D)																	
4	Sterilized/ UHT Cream			Sterilized/UHT cream product shall comply with a test for commercial sterility as per IS : 4884																	

Sr. No	Product Description1	Salmonella sp.				*Listeria monocytogenes*				*Bacillus cereus*				Sulphite Reducing Clostridia				*Enterobacter sakazakii (Cronobacter sp.*			
		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
5	Sweetened Condensed Milk[6]	5	0	Absent/ 25g	NA	5	0	Absent/ g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6	Pasteurized Butter[2]	5	0	Absent/ 25g	NA	5	0	Absent/ g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	Milk Powder; SMP, PSMP; Dairy Whiener; Cream Powder ; Ice Cream Mix Powder; Lactose; Whey based Powder; Butter Milk Powder; Casein Powder	5	0	Absent/ 25g	NA	5	0	Absent/ g	NA	5	3	$5x10^2$/ g	$1x10^3$/ g	5	3	50/g	$1x10^2$ /g	NA	NA	NA	NA
8	Infant Milk Food, Infant Formulae, Infant Milk Substitutes	60	0	Absent/ 25g	NA	10	0	Absent/ 25g	NA	5	2	$1x10^2$/ g	$5x10^2$/ g	5	2	10/g	$1x10^2$ /g	30	0	Absent /10g	NA
	Follow Up Formula	15	0	Absent/ 25g	NA	10	0	Absent/ 25g	NA	5	2	$1x10^2$/ g	$5x10^2$/ g	5	2	10/g	$1x10^2$ /g	NA	NA	NA	NA
	Cereal Based Complimentary Food	15	0	Absent/ 25g	NA	10	0	Absent/ 25g	NA	5	2	$1x10^2$/ g	$5x10^2$/ g	5	2	10/g	$1x10^2$ /g	NA	NA	NA	NA
9	Ice Cream, Frozen Dessert, Milk Lolly, Ice Candy	5	0	Absent/ 25g	NA	5	0	Absent/ g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sr. No	Product Description1	Salmonella sp.				*Listeria monocytogenes*				*Bacillus cereus*				Sulphite Reducing Clostridia				*Enterobacter sakazakii (Cronobacter sp.*			
		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
10	Processed Cheese/ Cheese Spread	5	0	Absent/ 25g	NA	5	0	Absent / 25g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11	All other cheeses categories including fresh cheeses / Cheddar / Cottage /Soft /Semi Soft etc	5	0	Absent/ 25g	NA	5	0	Absent/ 25 g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12	Fermented Milk Products-	5	0	Absent/ 25g	NA	5	0	Absent/ g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13	Paneer/ Chhana/ chhana based sweets	5	0	Absent/ 25g	NA	5	0	Absent/ g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
14	Khoa/ Khoa based sweets	5	0	Absent/ 25g	NA	5	0	Absent/ g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Test Methods[7]	**IS 5887 : Part 3/ ISO : 6579**				**IS 14988 : Part 1/ ISO: 11290-1**				**IS 5887 (Part 6) /ISO:7932**				**ISO : 15213**				**ISO/TS 22964**			

NA- Not Applicable

[1]Microbiological standards shall also be applicable for proprietary dairy foods depending on their analogy as determined by FSSAI with the product categories specified in **Table 2A and 2 B**

[2]The microbiological specifications for ripened butter are the same as for pasteurized butter excluding the requirements of Aerobic Plate Count.

[3]The yeast and mold count of 50/g as specified in dried product categories shall be applicable only to casein powder

[4]For products in this category (Infant Milk Food, Infant Formulae, Infant Milk Substitute), the *enterobacteriaceae* shall be tested. The microbiological criteria applicable is n=10; c=2; m= Absent/10g; M=Not Applicable. Method of analysis is ISO 21528-1 and 21528-2, as appropriate.

[5]The yeast and mold counts is not applicable in mold ripened cheeses

[6]The Sweetened condensed milk product shall comply accelerated storage test as per IS: 1166 (latest version)

Stage where the Microbiological Standards shall apply:

The Microbiological Standards in **Table-2A** (Process Hygiene Criteria) indicate the acceptable functioning of the production process. These are not to be used as requirements for releasing the products in the market. These are indicative contamination values above which corrective actions are required in order to maintain the hygiene of the process in compliance with food law. These shall be applicable at the end of the manufacturing process.

[63[The Microbiological Standards in **Table-2B** (Food Safety Criteria) define the acceptability of a batch or lot and shall be met in respect of the product at the end of the manufacturing process and the products in the market during their shelf- life.]

Action in case of unsatisfactory result:

In case of non-compliance in respect of process hygiene criteria specified in **Table- 2A,** the FBO shall:

- check and improve process hygiene by implementation of guidelines in Schedule 4 (Part III) of FSS (Licensing and Registration of Food Businesses) Regulations; and,

- [63[Ensure that all food safety criteria as specified in Table-2B are complied with.]

The Microbiological Standards in **Table-2B** (Food Safety Criteria) define the acceptability of a batch/lot and shall be met in respect of the product for releasing it in the market. These shall be applicable to the products at the end of the manufacturing process and the products in the market during their shelf- life.

Sampling Plans and Guidelines;

For Regulator: The sampling for different microbiological standards with respect to the products specified in **Table-2A and 2B** shall be ensured aseptically at manufacturing units and/or at retail points, as applicable, by a trained person with specialized knowledge in the field of microbiology following guidelines in the Food Safety and Standards(Food Products and Food Additives) Regulations, 2011 and ISO: 707 **(Latest version**). The samples shall be stored and transported at a temperature below 5°C (but not frozen), except the products that are recommended to be stored at room

temperature by the manufacturer, to enable initiation of analysis within 24 hours of sampling. Preservatives shall not be added to sample units intended for microbiological examination. The desired number of sample units as per sampling plan given in **Table-2A & 2B** shall be taken from same batch/lot and shall be submitted to the notified laboratory. The testing in laboratory shall be ensured as per reference test methods given below in reference test methods for regulatory compliance. [63][A set (n) of five samples shall be tested from three different accredited laboratories and the final decision shall be drawn based on three test results. There will be no provision for retesting or re-sampling for microbiological testing]. The final decision shall be drawn based on results with no provision for retesting for microbiological parameters.

For FBO: Food Business Operator (FBO) shall perform testing as appropriate as per the microbiological standards with respect to the products specified in **Table-2A & 2B** to ensure validation and verification of compliance with the microbiological requirements. FBO shall decide themselves the necessary sampling and testing frequencies to ensure compliance with the specified microbiological requirements. FBO may use analytical methods other than those described in reference test methods given below for in-house testing only. However, these methods shall not be applicable for regulatory compliance purpose.

Sampling Plan:

The terms n,c,m and M used in this standard have the following meaning:
n = Number of units comprising a sample .
c = Maximum allowable number of units h
aving microbiological counts above m for 2- class sampling plan and between m and M for 3- class sampling plan..
m = Microbiological limit that separates unsatisfactory from satisfactory in a 2- class sampling plan or acceptable from satisfactory in a 3-class sampling plan.
M = Microbiological limit that separates unsatisfactor y from satisfactory in a 3-class sampling plan.

Interpretation of Results:

2-Class Sampling Plan (where n, c and m are specified)	3-Class Sampling Plan (where n, c, m and M are specified)
1. Satisfactory, if all the values observed are ≤ m 2. Unsatisfactory, if one or more of the values observed are >m or more than c values are > m	1. Satisfactory, if all the values observed are ≤ m 2. Acceptable, if a maximum of c values are between m and M and the rest of the values are observed as ≤ m 3. Unsatisfactory, if one or more of the values observed are >M or more than c values are > m

Reference test methods: The following test methods shall be applied as reference methods.

Reference test methods- latest version shall apply. In case where an ISO method adopted by the BIS is specified (e.g IS XXXX / ISO YYYY), latest version of the ISO method (or its BIS equivalent, if available) shall apply. [63][Test methods prescribed in FSSAI Manual of Methods of Analysis of Foods (Microbiological Testing) may also be referred along with the IS/ISO methods specified for Process Hygiene Criteria and Food Safety Criteria].

Sr. no.	Parameter	Reference Test Methods
1.	Aerobic Plate Count	Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms -- Part 1: Colony count at 30 degrees C by the pour plate technique- IS 5402/ ISO:4833
2.	Coliforms	Microbiology of food and animal feeding stuffs -- Horizontal method for the Detection and Enumeration of Coliforms – Part-1 Colony-Count Technique- IS: 5401 Part 1 Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of Coliforms - Colony-count technique- ISO 4832
3.	Enterobacteriaceae	Microbiology of food and animal feeding stuffs -- Horizontal methods for the detection and enumeration of Enterobacteriaceae -- Part 1: Detection and enumeration by MPN technique with pre-enrichment- ISO 21528 Part 1 Microbiology of food and animal feeding stuffs -- Horizontal methods for the detection and enumeration of Enterobacteriaceae -- Part 2: Colony-count method- ISO 21528 Part 2
4.	*Staphylococcus aureus*	Methods for detection of bacteria responsible for food poisoning :Part 2 Isolation, identification and enumeration of *Staphylococcus aureus* and *Faecal streptococci*- IS 5887 : Part 2 Methods for Detection of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration Of *Coagulase-Positive Staphylococci*/ (*Staphylococcus aureus* and other species) **Section 1 Technique using baird-parker agar medium-** IS 5887 (Part 8/Sec 1: / ISO 6888-1: 1999 Methods For Detection Of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration Of *Coagulase-Positive Staphylococci*/ (*Staphylococcus aureus* And Other Species) **Section 2 Technique using rabbit plasma fibrinogen agar medium-** IS 5887 (Part 8/Sec 2) / ISO 6888-2: 1999
5.	*Enterobacter sakazakii*	Milk and milk products -- Detection of *Enterobacter sakazakii*- ISO/TS 22964

6.	Yeast and Mould Count	Method for Yeast and Mould Count of Food Stuffs and Animal feed- IS 5403 Milk and milk products -- Enumeration of colony-forming units of Yeasts and/or Moulds -- Colony-count technique at 25 degrees C- ISO 6611
7.	*Escherichia coli*	Methods for Detection of Bacteria Responsible for Food Poisoning - Part I : Isolation, Identification and Enumeration of *Escherichia coli*- IS 5887 : Part 1 Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of beta-glucuronidase-positive *Escherichia coli* -- Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide- ISO: 16649-2
8.	*Salmonella*	Methods for Detection of Bacteria Responsible for Food Poisoning - Part 3 : General Guidance on Methods for the Detection of *Salmonella*- IS 5887 : Part 3 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of *Salmonella* spp.- ISO 6579
9.	*Listeria monocytogenes*	Microbiology of the food chain -- Horizontal method for the detection and enumeration of *Listeria monocytogenes* and other Listeria spp. -- Part 1: Detection method- ISO: 11290-1 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection and enumeration of *Listeria monocytogenes* -- Part 2: Enumeration Method- ISO: 11290-2 Microbiology of Food and Feeding Stuffs - Horizontal method for Detection and Enumeration of *Listeria Monocytogenes* : Part 1 Detection Method- IS 14988 : Part 1 Microbiology of Food and Animal Feeding Stuffs - Horizontal Method for the Detection and Enumeration of *Listeria monocytogenes* - Part 2 : Enumeration Method- IS 14988 : Part 2
10.	*Bacillus cereus*	Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of presumptive *Bacillus cereus* -- Colony-count technique at 30 degrees C- IS 5887 (Part 6) /ISO:7932

11.	Sulfite-reducing bacteria	Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of sulfite-reducing bacteria growing under anaerobic conditions- ISO 15213
12.		Milk and milk products - Guidance on sampling- ISO:707
13.		Indian Standard Specification for sterilized milk- IS: 4238
14.		Specification for sterilized cream- IS: 4884
15.		Specification for condensed milk, partly skimmed and skimmed condensed milk - IS :1166.".]

[70][Table: 3 Microbiological Standards for Spices and Herbs

Table -3 A Microbiological Requirements for Spices and Herbs –Process Hygiene Criteria

Sr. No.	Product Category[i]	Aerobic Colony Count				Yeast and Mold Count				Enterobacteriaceae				*Staphylococcus aureus*			
		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)	
		n	C	m	M	n	c	m	M	n	c	m	M	n	c	m	M
1.	**Fresh[ii]**																
2.	**Dried or Dehydrated**	5	2	$1x10^6$	$1x10^7$	5	2	$1x10^4$	$1x10^5$	5	2	$1x10^2$	$1x10^3$	5	2	$1x10^2$	$1x10^3$
3.	**Ground or Powdered**	5	2	$1x10^6$	$1x10^7$	5	2	$1x\ 10^4$	$1x\ 10^5$	5	2	$1x10^2$	$1x10^3$	5	2	$1x10^2$	$1x10^3$
4.	**Extracted**	5	2	$1x10^3$	$1x\ 10^4$	5	2	$1x10^2$	$1x\ 10^3$	5	1	$1x10^1$	$1x\ 10^2$	5	1	$1x10^1$	$1x10^2$
5.	**Wet ground (Paste)/ preserved or pickled**	5	2	$1x\ 10^3$	$1x\ 10^4$	5	2	$1x\ 10^3$	$1x\ 10^4$	5	2	$1x10^2$	$1x\ 10^3$	5	2	$1x10^1$	$1x10^2$
	Method of analysis[iii]	IS: 5402/ ISO 4833				IS: 5403/ ISO 21527 Part 1 and Part 2				IS/ISO:7402/ ISO 21528 Part 2				IS:5887, Part 2 and IS 5887 part 8 (Sec 1)/ ISO 6888-1 or IS:5887 Part 8 (Sec2)/ISO 6888-2			

Table -3 B Microbiological Requirements for Spices and Herbs – Food Safety Criteria

Sr. No.	Product Category[i]	*Salmonella*				Sulphite Reducing Clostridia				*Bacillus cereus*			
		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)	
		N	c	m	M	n	c	m	M	N	c	m	M
1.	**Fresh[ii]**												
2.	**Dried or Dehydrated**	5	0	Absent/25 g	NA	5	2	$1x10^2$	$1x10^3$	5	2	$1x10^3$	$1x10^4$
3.	**Ground or Powdered**	5	0	Absent/25 g	NA	5	2	$1x10^2$	$1x\ 10^3$	5	2	$1x10^3$	$1x10^4$
4.	**Extracted**	5	0	Absent/25 g	NA	5	1	$1x10^1$	$1x\ 10^2$	5	1	$1x10^1$	$1x\ 10^2$
5.	**Wet ground (Paste)/ preserved or pickled**	5	0	Absent/25 g	NA	5	2	$1x10^1$	$1x\ 10^2$	5	2	$1x10^1$	$1x\ 10^2$
6.	**Method of analysis[iii]**	IS: 5887 Part 3/ISO:6579				ISO 15213				IS:5887,Part 6 ISO 7932			

NA-Not applicable

[i]Definitions:

a. **Fresh**: The spices and herbs that are consumed fresh.

b. **Dried or dehydrated**: The product obtained by drying/ removal of most of the moisture by any suitable method which ensures characteristics of fresh spices on rehydration or pre-cooking.

c. **Ground or powdered**: Ground or powdered product obtained by grinding or crushing of clean dried/dehydrated fruits, capsules, buds, seeds, rhizomes, aril, kernel, berries and stigmas etc.

d. **Extracted:** Products of the spices and herbs which are produced by extracting in a concentrated form including oleoresins.

e. Wet ground (paste)/preserved or pickled: Semi solid, preserved product using brine, vinegar and other permitted preservatives or physical methods.

For detailed product definition, refer to Food Safety & Standards (Food Product Standards & Food Additives) Regulations, 2011.

[ii]. The category "Fresh" shall be regulated in accordance with the Good Manufacturing Practices and Code of Good Hygiene Practices notified under Schedule4 of FSS (Licensing and Registration of Food Businesses) Regulations, 2011.

Stage where the Microbiological Standards shall apply:

The microbiological standards with respect to the product categories specified in **Table-3A** (Process Hygiene Criteria) indicate the acceptable functioning of the production process. These are not to be used as requirements for releasing the products in the market. These are indicative values above which corrective actions are required in order to maintain the hygiene of the process in compliance with food law. These shall be applicable at the end of the manufacturing process. The Microbiological Standards in **Table-3B** (Food Safety Criteria) define the acceptability of a batch/lot and shall be met in respect of the products at the end of manufacturing process and the products in the market during their shelf- life.

Action in case of unsatisfactory result:

In case of non-compliance in respect of Process Hygiene Criteria specified in **Table- 3A,** the FBO shall:

- check and improve process hygiene by implementation of guidelines in Schedule 4 of FSS (Licensing and Registration of Food Businesses) Regulations; and,
- Ensure that all food safety criteria as specified in **Table -3B** are complied with.

Sampling Plans and Guidelines;

For Regulator: The sampling for different microbiological standards specified in **Table-3A and 3B** shall be ensured aseptically at manufacturing units and/or at retail points, as applicable, by a trained person with specialized knowledge in the field of microbiology following guidelines in the Food Safety and Standards (Food Products and Food Additives) Regulations, 2011 and ISO: 707 **(Latest version**). The samples shall be stored and transported in frozen condition at -18°C(±2°C) or under refrigerated conditions at 2-5°C as applicable except the products that are recommended to be stored at room temperature by the manufacturer to enable initiation of analysis within 24 hours of sampling. Preservatives shall not be added to sample units intended for microbiological examination. The desired number of sample units as per sampling plan given in **Table-3A & 3B** shall be taken from same batch/lot and shall be submitted to the notified laboratory.. Three sets, each containing 'n' number of samples (n as defined in the sampling planeg if n=5, then total no. of samples to be drawn is 15) shall be drawn. Each of these three sets shall be tested in three different accredited laboratories .The final decision shall be based on the results of three accredited laboratories. In the case of food safety criteria (Table 8B), results from all the three laboratories should indicate compliance with specified criteria.There will be no provision for retesting or resampling for microbiological testing. The testing in laboratory shall be ensured as per reference test methods given below in reference test methods for regulatory compliance.

For FBO: Food Business Operator (FBO) shall perform testing as appropriate as per the microbiological standards in **Table-3A & 3B** to ensure validation and verification of compliance with the microbiological requirements. FBO shall decide themselves subject to minimum prescribed under FSSR (Licensing and Registration of Food Businesses),the necessary sampling and testing frequencies to ensure compliance with the specified microbiological requirements. FBO may use analytical methods other than those described in reference test methods given below for in-house testing only. However, these methods shall not be applicable for regulatory compliance purpose.

Sampling Plan:

The terms n, c, m and M used in this standard have the following meaning:

n = Number of units comprising a sample.

c = Maximum allowable number of units having microbiological counts above m for 2- class sampling plan and between m and M for 3- class sampling plan.

m = Microbiological limit that separates unsatisfactory from satisfactory in a 2- class sampling plan or acceptable from satisfactory in a 3-class sampling plan.

M = Microbiological limit that separates unsatisfactory from satisfactory in a 3-class sampling plan.

Interpretation of Results:

2-Class Sampling Plan (where n,c and m are specified)	**3-Class Sampling Plan (where n,c,m and M are specified)**
1. Satisfactory, if all the values observed are ≤ m **2.** Unsatisfactory, if one or more of the values observed are >m.	1. Satisfactory, if all the values observed are ≤ m 2. Acceptable, if a maximum of c values are between m and M. 3. Unsatisfactory, if one or more of the values observed are > M or more than prescribed c values are >m

[iii.] **Reference test methods:** The following test methods shall be applied as reference methods. Test methods prescribed in FSSAI Manual of Method of Analysis of Foods (Microbiological Testing) may also be referred along with the IS/ISO methods specified for Process Hygiene Criteria and Food Safety Criteria**.** Latest version of test methods shall apply. In case where an ISO method adopted by the BIS is specified (e.g IS XXXX / ISO YYYY), latest version of the ISO method (or its BIS equivalent, if available) shall apply.

Sr. No.	**Parameter**	**Reference Test methods**
1.	Aerobic Plate Count	Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms -- Part 1: Colony count at 30 °C by the pour plate technique- IS 5402/ ISO:4833
2.	Yeast and Mold Count	Method for Yeast and Mold Count of Food Stuffs and Animal feed- IS 5403 Microbiology of food and animal feeding stuff-Horizontal method for the enumeration of yeasts and moulds-Part1: Colony count technique in products with water activity greater than 0.95-ISO 21527-1 Microbiology of food and animal feeding stuff-Horizontal method for the enumeration of yeasts and moulds-Part2: Colony count technique in products with water activity less than 0.95-ISO 21527-2
3.	Enterobacteriaceae	Microbiology - General Guidance for the Enumeration of Enterobacteriaceae without Resuscitation - MPN Technique and Colony-count Technique- IS/ISO 7402 Microbiology of Food and Animal feeding stuff –Horizontal methods for the detection and enumeration of Enterobacteriaceae- Part 2:Colony- count method-ISO 21528-2

4.	*Staphylococcus aureus*	Methods for detection of bacteria responsible for food poisoning: Part 2 Isolation, identification and enumeration of *Staphylococcus aureus* and faecal streptococci- IS 5887 : Part 2 Methods for Detection of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration of Coagulase-Positive Staphylococci/ (*Staphylococcus aureus* and other species) **Section 1 Technique using baird-parker agar medium -** IS 5887 (Part 8/Sec 1: / ISO 6888-1: 1999 Methods For Detection Of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration Of Coagulase-Positive Staphylococci/ (*Staphylococcus aureus* And Other Species) **Section 2 Technique using rabbit plasma fibrinogen agar medium-** IS 5887 (Part 8/Sec 2) / ISO 6888-2: 1999
5.	*Salmonella*	Methods for Detection of Bacteria Responsible for Food Poisoning - Part 3: General Guidance on Methods for the Detection of Salmonella- IS 5887 : Part 3 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of Salmonella spp.- ISO6579
6.	Sulfite-Reducing Bacteria	Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of sulfite-reducing bacteria growing under anaerobic conditions- ISO 15213
7.	*Bacillus cereus*	Microbiology of Food and Animal Feeding Stuffs-Horizontal Method for the Enumeration of Preservative Bacillus Cereus, Part 6 Colony –count Technique at 30°C- IS 5887-6 Microbiology of food and animal feeding stuffs-Horizontal method for the enumeration of presumptive Bacillus cereus-Colony- count technique at 30degrees C.-ISO 7932.]

[46][**Table 4A: Microbiological Standards for Fruits and Vegetables and their Products – Process Hygiene Criteria**

Sl. No.	Product description [1]	Aerobic Plate Count				Yeast and Mold Count				*Enterobacteriaceae*				*Staphylococcus aureus* (Coagulase +ve)			
		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
1.	Fresh[2]					NA											
2.	Cut or minimally processed and packed, including juices (Non-thermally processed)	5	2	$1x10^6$/g	$1x10^7$/g	5	1	$1x10^2$/g	$1x10^4$/g	5	2	$1x10^2$/g	$1x10^4$/g	5	1	$1x10^2$/g	$1x10^3$/g
3.	Fermented[3] or pickled or acidified or with preservatives	NA				5	1	$1x10^2$/g	$1x10^3$/g	5	2	$1x10^2$/g	$1x10^3$/g	5	1	10/g	$1x10^2$/g
4.	Pasteurized Juices[4]	5	2	$1x10^2$/ml	$1x10^4$/ml	5	1	$1x10^2$/ml	$1x10^3$/ml	5	0	Not detectable as per prescribed method		5	0	Absent/25ml	
	Carbonated Fruit beverages[4]	5	1	50/ml	$5x10^2$/ml	5	0	<10/ml		5	0			5	0	Absent/25ml	
5.	Frozen	5	2	$4x10^4$/g	$5x10^5$/g	5	1	$1x10^2$/g	$1x10^3$/g	5	2	$1x10^2$/g	$3x10^2$/g	5	1	20/g	$1x10^2$/g

6.	Dehydrated or dried	5	1	$4x10^4$/g	$1x10^5$/g	5	1	$1x10^2$/g	$1x10^4$/g	5	1	$1x10^2$/g	$1x10^3$/g	5	1	10/g	$1x10^2$/g
7.	Thermally processed (other than pasteurization at less than 100°C)	5	1	$1x10^2$/g	$1x10^3$/g	5	1	50/g	$1x10^2$/g	5	0	Not detectable as per prescribed method		5	0	Absent/25g	
8.	Retort processed[5]	5	0	50/g		NA				5	0			5	0	Absent/25g	
	Test Methods[6]	IS: 5402/ISO:4833				IS: 5403/ ISO 21527 Part 1 and Part 2				IS/ISO 7402/ ISO 21528 Part 2				IS:5887, Part 2 and IS 5887 part 8 (Sec 1)/ ISO 6888-1 or IS:5887 Part 8 (Sec2)/ISO 6888-2			

Table 4B: Microbiological Standards for Fruits and Vegetables and their Products-Food Safety Criteria

Sl. N.	Product description[1]	*Salmonella*			*Listeria monocytogenes*			Sulphite Reducing Clostridia (SRC)				*E. Coli 0157* and Vero or Shiga toxin producing *E coli*			*Vibrio cholerae*		
		Sampling Plan		Limit (cfu)	Sampling Plan		Limit (cfu)	Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)	Sampling Plan		Limit (cfu)
		n	c	m M	n	c	m M	n	c	m	M	n	c	m M	n	c	m M
1.	Fresh[2]	NA			NA			NA				NA			NA		
2.	Cut or minimally processed and packaged, including juices (Non-thermally processed)	5	0	Absent/ 25 g	5	0	Absent/25 g	NA	NA	NA	NA	5	0	Absent/25 g	5	0	Absent/25 g
3.	Fermented[3] or pickled or acidified or with preservatives	5	0	Absent/ 25 g	5	0	Absent/25 g	NA	NA	NA	NA	5	0	Absent/25 g	5	0	Absent/25 g
4.	Pasteurized Juices[4]	5	0	Absent/ 25 ml	5	0	Absent/25 ml	NA	NA	NA	NA	5	0	Absent/25 ml	5	0	Absent/25 ml

Sl. N.	Product description[1]	*Salmonella*			*Listeria monocytogenes*			Sulphite Reducing Clostridia (SRC)				*E. Coli 0157* and Vero or Shiga toxin producing *E coli*			*Vibrio cholerae*		
		Sampling Plan		Limit (cfu)	Sampling Plan		Limit (cfu)	Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)	Sampling Plan		Limit (cfu)
		n	c	m M	n	c	m M	n	c	m	M	n	c	m M	n	c	m M
	Carbonated fruit beverages[4]	5	0	Absent/ 25 ml	5	0	Absent/25 ml	NA	NA	NA	NA	5	0	Absent/25 ml	5	0	Absent/25 ml
5.	Frozen	5	0	Absent/ 25 g	5	0	Absent/25 g	NA	NA	NA	NA	5	0	Absent/25 g	5	0	Absent/25 g
6.	Dehydrated or dried	5	0	Absent/ 25 g	5	0	Absent/25 g	NA	NA	NA	NA	5	0	Absent/25 g	5	0	Absent/25 g
7.	Thermally processed (other than pasteurization at less than 100°C	5	0	Absent/ 25 g	5	0	Absent/25 g	NA	NA	NA	NA	5	0	Absent/25 g	5	0	Absent/25 g
8.	Retort processed[5]	5	0	Absent/25 g	5	0	Absent/25 g	5	0	Absent/25 g		5	0	Absent/25 g	5	0	Absent/25 g

Sl. N.	Product description[1]	*Salmonella*				*Listeria monocytogenes*				Sulphite Reducing Clostridia (SRC)				*E. Coli 0157* and Vero or Shiga toxin producing *E coli*				*Vibrio cholerae*			
		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
	Test Methods[6]	IS: 5887 Part3 / ISO:6579				IS: 14988, Part 1 / ISO 11290-1				ISO 15213				IS: 14397				IS:5887, (Part V)/ ISO 21872 Part 1			

Note- 'ml' will be applicable in place of 'g' in case of liquid product.

NA-Not applicable

[1] **Definitions of fruits and vegetables and their products**

(a) **Fresh**: The whole fruits and vegetables that are sold fresh.

(b) **Cut or minimally processed and packaged including juices**: Fruits and vegetables which are washed or sanitized or peeled or cut up and made in to juice and packed.

(c) **Fermented or pickled or acidified or with preservatives**: Fruits and vegetables including their products which are preserved using living ferments like yeast, bacterium, mold, enzyme or in brine to produce lactic acid or marinating and storing it in an acid solution, usually vinegar (acetic acid), salt and sugar.

(d) **Pasteurized Juices**: Fruit and vegetable j*uices that are subjected to pasteurization* to destroy or inactivate harmful microorganisms.

(e) **Carbonated fruit beverages (and fruit drinks):** Any beverage or drink which is prepared from fruit juice and water or carbonated water and containing sugar, dextrose, invert sugar or liquid glucose either in single or in combination which may contain peel oil and fruit essences. It may also contain any other ingredients appropriate to the products.

(f) **Frozen**: Fruits and vegetables including their products which are subjected to a freezing process and maintained at temperature of -18^0C.

(g) **Dehydrated or dried**: Fruits and vegetables including their products which are preserved by removing most of their water content following an appropriate dehydrating process.

(h) **Thermally processed (other than pasteurization at less than 100°C)**: Fruits and vegetables including their products which are processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

(i) **Retort processed**: Fruits and vegetables including their products which are canned or flexible packaged, processed by retorting.

For detailed product description, refer to regulation 2.3 related to Fruit & Vegetable Products of these regulations.

[2]The category "Fresh" shall be regulated in accordance with the Good Manufacturing Practices and Good Hygiene Practices specified under Schedule 4 of Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011.

[3]In case of fermentation process involving yeast/ mold the respective standard for yeast and mold count does not apply.

[4]Carbonated fruit beverages and pasteurized fruit juices can be excluded for testing of *Listeria*, where the pH is below 4.4.

[5]The retort processed foods shall be tested after incubation at 37°C for 10 days and at 55°C for 7 days.

Stage where the Microbiological Standards shall apply:

The microbiological standards with respect to the products categories specified in Table-4A (Process Hygiene Criteria) indicate the acceptable functioning of the production process. These are not to be used as requirements for releasing the products in the market. These are indicative values above which corrective actions are required in order to maintain the hygiene of the process in compliance with food law. These shall be applicable at the end of the manufacturing process.

[63][The Microbiological Standards in Table-4B (Food Safety Criteria) define the acceptability of a batch/lot and shall be met in respect of the product at the end of the manufacturing process and the products in the market during their shelf- life.]

Action in case of unsatisfactory result:

In case of non-compliance in respect of process hygiene criteria specified in Table- 4A, the FBO shall:

- check and improve process hygiene by implementation of guidelines in Schedule 4 of FSS (Licensing and Registration of Food Businesses) Regulations; and,
- Ensure that all food safety criteria as specified in Table -4B (Food Safety Criteria) are complied with.

[63][****]

Sampling Plans and Guidelines;

For Regulator: The sampling for different microbiological standards specified in Table-4A and 4B shall be ensured aseptically at manufacturing units and/or at retail points, as applicable, by a trained person with specialized knowledge in the field of microbiology following guidelines in the Food Safety and Standards (Food Products and Food Additives) Regulations, 2011 and ISO: 707 (Latest version). The samples shall be stored and transported in frozen condition at -18°C (±2°C) or under refrigerated conditions at 2-5°C as applicable except the products that are recommended to be stored at room temperature by the manufacturer to enable initiation of analysis within 24 hours of sampling. Preservatives shall not be added to sample units intended for microbiological examination. The desired number of sample units as per sampling plan given in Table-4A & 4B shall be taken from same batch/lot and shall be submitted to the notified laboratory. [63][A set (n) of five samples shall be tested from three different accredited laboratories and the final decision shall be drawn based on three test results. There will be no provision for retesting or re-sampling for microbiological testing.] The testing in laboratory shall be ensured as per reference test methods given below in reference test methods for regulatory compliance.

For FBO: Food Business Operator (FBO) shall perform testing as appropriate as per the microbiological standards in Table-4A & 4B to ensure validation and verification of compliance with the microbiological requirements. FBO shall decide themselves the necessary sampling and testing frequencies to ensure compliance with the specified microbiological requirements. FBO may use analytical methods other than those described in reference test methods given below for in-house testing only. However, these methods shall not be applicable for regulatory compliance purpose.

Sampling Plan:

The terms n, c, m and M used in this standard have the following meaning:

n = Number of units comprising a sample.

c = Maximum allowable number of units having microbiological counts above m for 2- class sampling plan and between m and M for 3- class sampling plan.

m = Microbiological limit that separates unsatisfactory from satisfactory in a 2- class sampling plan or acceptable from satisfactory in a 3-class sampling plan.

M = Microbiological limit that separates unsatisfactory from satisfactory in a 3-class sampling plan.

Interpretation of Results:

2-Class Sampling Plan (where n, c and m are specified)	**3-Class Sampling Plan (where n, c, m and M are specified)**
3. Satisfactory, if all the values observed are ≤ m 4. Unsatisfactory, if one or more of the values observed are >m or more than c values are >m	4. Satisfactory, if all the values observed are ≤ m 5. Acceptable, if a maximum of c values are between m and M and the rest of the values are observed as ≤m 6. Unsatisfactory, if one or more of the values observed are > M or more than c values are >m

Reference test methods: The following test methods shall be applied as reference methods.

[6]**Reference test methods-** latest version shall apply. In case where an ISO method adopted by the BIS is specified (e.g IS XXXX / ISO YYYY), latest version of the ISO method (or its BIS equivalent, if available) shall apply. [63][Test methods prescribed in FSSAI Manual of Methods of Analysis of Foods (Microbiological Testing) may also be referred along with the IS/ISO methods specified for Process Hygiene Criteria and Food Safety Criteria.]

Sl. No	**Parameter**	**Reference Test Methods**
1.	Aerobic Plate Count	Microbiology of the food chain - Horizontal method for the enumeration of microorganisms - Part 1: Colony count at 30°C by the pour plate technique- IS 5402/ ISO:4833

Sl. No	Parameter	Reference Test Methods
2.	Yeast and Mold Count	Method for Yeast and Mold Count of Food Stuffs and Animal feed- IS 5403 Microbiology of food and animal feeding stuff-Horizontal method for the enumeration of yeasts and moulds- Part1: Colony count technique in products with water activity greater than 0.95-ISO 21527-1 Microbiology of food and animal feeding stuff-Horizontal method for the enumeration of yeasts and moulds- Part2: Colony count technique in products with water activity less than 0.95-ISO 21527-2
3	Enterobacteriaceae	Microbiology - General Guidance for the Enumeration of Enterobacteriaceae without Resuscitation - MPN Technique and Colony-count Technique- IS/ISO 7402 Microbiology of Food and Animal feeding stuff –Horizontal methods for the detection and enumeration of Enterobacteriaceae- Part 2:Colony- count method-ISO 21528-2
4	*Staphylococcus aureus*	Methods for detection of bacteria responsible for food poisoning: Part 2 Isolation, identification and enumeration of *Staphylococcus aureus* and faecal streptococci- IS 5887 : Part 2 Methods for detection of bacteria responsible for food poisoning: Part 8 Horizontal Method for enumeration of Coagulase-Positive Staphylococci/ (*Staphylococcus aureus* and other species) Section 1 Technique using baird-parker agar medium - IS 5887 (Part 8/Sec 1: / ISO 6888-1: 1999) Methods for detection of bacteria responsible for food poisoning: Part 8 Horizontal Method for enumeration of Coagulase-Positive Staphylococci/ (*Staphylococcus aureus* And Other Species) Section 2 Technique using rabbit plasma fibrinogen agar medium- IS 5887 (Part 8/Sec 2) / ISO 6888-2: 1999)
5	*E. Coli 0157* and Vero or Shiga toxin producing *E Coli*	Methods for detection, isolation and identification of pathogen i.e. E.coli in foods- IS :14397

Sl. No	Parameter	Reference Test Methods
6	*Salmonella*	Methods for detection of bacteria responsible for food poisoning - Part 3: General Guidance on Methods for the Detection of Salmonella- IS 5887 : Part 3 Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp.- ISO 6579
7	*Listeria monocytogenes*	Microbiology of the food chain - Horizontal method for the detection and enumeration of *Listeria monocytogenes* and other Listeria spp. - Part 1: Detection method – IS: 14988, Part 1 / ISO 11290-1
8	Sulfite-Reducing Bacteria	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of sulfite-reducing bacteria growing under anaerobic conditions- ISO 15213
9	*Vibrio cholerae*	Isolation, identification and enumeration of *Vibrio cholerae* and *Vibrio parahaemolyticus* - IS:5887, (Part V) Microbiology of food and animal feeding stuff-Horizontal method for the detection of potentially enteropathogenic Vibrio spp.-Part 1: Detection of Vibrio parahaemolyticus and Vibrio cholerae-ISO/TS 21872-1]

[21][**Table 5**

Microbial Standards for Meat and Meat Products

Table 5A: Microbiological Standards for Meat and Meat Products- Process Hygiene Criteria

S. No.	**Product Category[1]**	**Aerobic Plate Count**				**Yeast and Mold Count**				***Escherichia coli***				***Staphylococcus aureus* (Coagulase +ve)**			
		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
1.	Fresh meat/ Chilled meat[2]	5	3	$1x10^6$	$5x10^6$	5	2	$1x10^4$	$5x10^4$	5	2	$1x10^2$	$1x10^3$	5	2	$1x10^2$	$1x10^3$
2.	Frozen meat[2]	5	2	$1x10^5$	$5x10^6$	5	2	$1x10^3$	$1x10^4$	5	2	1x10	$1x10^2$	5	2	10	$1x10^2$
3.	Raw marinated/minced /comminuted meat[2]	5	2	$5x10^5$	$5x10^6$	5	2	[57][$1x10^4$]	[57][$5x10^4$]	5	2	$1x10^2$	$1x10^3$	5	2	$1x10^2$	$1x10^3$
4.	Semi-cooked /Smoked Meat/ meat food Product[2]	5	2	$1x10^4$	$1x10^5$	5	2	10	$1x10^2$	5	2	10	$1x10^2$	5	2	10	$1x10^2$
5.	Cured/Pickled meat	5	2	$5x10^2$	$5x10^3$	5	2	$1x10^2$	$1x10^3$	5	2	10	$1x10^2$	5	1	$1x10^2$	$1x10^3$
6.	Fermented meat products	NA	NA	NA	NA	NA	NA	NA	NA	5	2	10	$1x10^2$	5	1	$1x10^2$	$1x10^3$
7.	Dried/dehydrated meat products	5	2	$1x10^3$	$1x10^4$	5	2	$1x10^2$	$1x10^3$	5	2	10	$1x10^2$	5	1	10	$1x10^2$
8.	Cooked Meat Products	5	2	$1x10^3$	$1x10^4$	5	1	10	$1x10^2$	5	2	10	$1x10^2$	5	1	10	$1x10^2$

9.	Canned/Retort pouch Meat Products	NA	NA	NA	NA	NA	NA	NA	NA	5	0	Absent	NA	5	0	Absent	NA
	Test Methods[3]	**IS: 5402/ISO 4833**				**IS: 5403/ISO 21527**				**IS: 5887 Part1 or ISO 16649-2**				**IS 5887 : Part 2 or IS 5887 Part 8 (Sec 1)/ ISO : 6888-1 or IS 5887 Part 8 (Sec 2)/ISO 6888-2**			

Table 5B: Microbiological Standards for Meat & Meat Products- Food Safety Criteria

Sr. No.	**Product Category[1]**	***[63][Salmonella[$]]***			***Listeria monocytogenes***			**Sulphite Reducing Clostridia**				***Clostridium Botulinum***				***Campylobacter* Spp***			
		Sampling Plan		Limits (cfu/25g)	Sampling Plan		Limits (cfu/25g)	Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)		Sampling Plan		Limits (cfu/g)	
		n	c	m M	n	C	m M	n	c	m	M	n	c	m	M	n	c	m	M
1.	Fresh meat / Chilled meat[2]	5	0	Absent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.	Frozen meat[2]	5	0	Absent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.	Raw marinated/minced/comminuted meat[2]	5	0	Absent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4.	Semi-cooked /Smoked Meat/meat food Product[2]	5	0	Absent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	0	Absent	

5.	Cured/Pickled meat	5	0	Absent	5	0	Absent	5	2	$5x10^2$	$5x10^3$	NA	NA	NA	NA	NA	NA	NA	NA
6.	Fermented meat products	5	0	Absent	5	0	Absent	5	2	$5x10^2$	$5x10^3$	NA	NA	NA	NA	NA	NA	NA	NA
7.	Dried/dehydrated meat product	5	0	Absent	5	0	Absent	5	2	$5x10^2$	$5x10^3$	NA	NA	NA	NA	NA	NA	NA	
8.	Cooked Meat Products	5	0	Absent	5	0	Absent	5	1	$1x10^2$	$1x10^3$	NA	NA	NA	NA	5	0	Absent	
9.	Canned/ Retort pouch Meat Products	5	0	Absent	5	0	Absent	5	0	Absent		5	0	Absent		5	0	Absent	
	Test Methods[3]	**IS: 5887 Part 3/ ISO 6579**			**IS: 14988, Part 1 &2/ISO 11290-1 & 2**			**ISO 15213**				**IS:5887, Part 4 or ISO 17919**				**ISO 10272-1&2**			

NA- Not Applicable

[63][$For poultry meat the requirement shall be applicable for *Salmonella enterica* serovars Typhi, Typhimurium and Entritidis.]

[1] Definition of meat and meat products:

Definition of animal, carcass , meat food product and slaughter house are the same as provided in FSS (Food Products Standards and Food Additives) Regulations 2011. Additionally the following definitions apply for the purpose of this regulation.

- **Canned/Retorted meat product:** Meat product packed in hermetically sealed containers which have been heat treated after sealing to such an extent that the product is shelf stable.
- **Chilled meat**: Fresh meat which has been washed with potable water and kept between 0-7^{0}C.
- **Cooked Meat/meat product**: Meat/meat product that is subjected to heat treatment, wherein minimum thermal core temperature of 75 ^{0}C is achieved.
- **Cured/pickled meat products:** Product prepared after curing/pickling meat in solution containing salt, nitrate/nitrite and adjuncts for the purpose of preservation and obtaining desirable colour, flavour and shelf life.
- **Dried/Dehydrated meat/meat products**: Meat/meat products in which part of free water has been removed by evaporation or sublimation.

- **Fermented meat product:** Chopped or ground meat products that have under gone ageing process and developed characteristics low pH, unique flavour, taste, texture and long shelf life through action of desirable microorganisms.
- **Fresh meat**: Meat that has not been treated in any way to ensure its preservation.
- **Frozen meat**: Fresh meat which has been washed with potable water, chilled and subjected to freezing in an appropriate equipment in such a way that product attains a temperature of -18^0C or colder at the thermal centre after thermal stabilization.
- **Raw marinated/minced/comminuted meat**: meat with or without bones which has been reduced to fragments by cutting/grinding/dicing/chopping/milling and/or marinated and with or without additives.
- **Semi-cooked /Smoked Meat/meat food Product:** Partially heat treated and/ or smoked meat and meat product, that will require additional heat treatment before consumption.
- **Slaughter:** Means killing of an animal for food employing a human method not inconsistent with the provisions of the prevention of cruelty to Animal act, 1960 (54 of 1960) in an authorized slaughter house or abattoir where the animal is subjected to through ante- mortem and post-mortem examination".
- **Raw processed whole, cut pieces or comminuted meat Products:** Raw processed, whole, cut pieces bone/ boneless and comminuted meat products with or without addition of other ingredients and additives as per specified in FSSAI standards.

[2] **Products under categories 1-5 to be cooked to make safe before consumption.**

Stage where the Microbiological Standards shall apply:

The Microbiological Standards with respect to the product categories specified in **Table-5A** (Process Hygiene Criteria) indicate the acceptable functioning of the production process. These are not to be used as requirements for releasing the products in the market. These are indicative contamination values above which corrective actions are required in order to maintain the hygiene of the process in compliance with food law. These shall be applicable at the end of the manufacturing process.

[63][The Microbiological Standards in Table-5B (Food Safety Criteria) define the acceptability of a batch/lot and shall be met in respect of the product at the end of the manufacturing process and the products in the market during their shelf- life.]

Action in case of unsatisfactory result:

In case of non-compliance in respect of process hygiene criteria specified in **Table- 5A**, the FBO shall:

- check and improve process hygiene by implementation of guidelines in Schedule 4 (Part IV) of FSS (Licensing and Registration of Food Businesses) Regulations; and,
- [63][Ensure that all food safety criteria's as specified in **Table -5B** are complied with.]

The Microbiological Standards in **Table-5B** (Food Safety Criteria) define the acceptability of a batch/lot and shall be met in respect of the product for releasing it in the market. These shall be applicable to the products at the end of the manufacturing process and the products in the market during their shelf- life.

Sampling Plans and Guidelines;

For Regulator: The sampling for different microbiological standards with respect to the product categories specified in **Table-5A and 5B** shall be ensured aseptically at manufacturing units and/or at retail points, as applicable, by a trained person with specialized knowledge in the field of microbiology following guidelines in t Food Safety and Standards(Food Products and Food Additives) Regulations, 2011 and ISO: 707 **(Latest version**). The samples shall be stored and transported at a temperature below 5°C (but not frozen), except the products that are recommended to be stored at room temperature by the manufacturer, to enable initiation of analysis within 24 hours of sampling. Preservatives shall not be added to sample units intended for microbiological examination. The desired number of samples as per sampling plan given in **Table-5A & 5B** shall be taken from same batch/lot and shall be submitted to the notified laboratory. The testing in laboratory shall be ensured as per reference test methods given below in reference test methods for regulatory compliance. [63][A set (n) of five samples shall be tested from three different accredited laboratories and the final decision shall be drawn based on three test results. There will be no provision for retesting or re-sampling for microbiological testing.] The final decision shall be drawn based on results with no provision for retesting for microbiological parameters.

For FBO: Food Business Operator (FBO) shall perform testing as appropriate as per the microbiological standards in **Table-5A & 5B** to ensure validation and verification of compliance with the microbiological requirements. FBO shall decide themselves the necessary sampling and testing frequencies to ensure compliance with the specified microbiological requirements. FBO may use analytical methods other than those described in reference test methods given below for in-house testing only. However, these methods shall not be applicable for regulatory compliance purpose.

Sampling Plan:

The terms n,c,m and M used in this standard have the following meaning:

n = Number of units comprising a sample .

c = Maximum allowable number of units having microbiological counts above m for 2- class sampling plan and between m and M for 3- class sampling plan..

m = Microbiological limit that separates unsatisfactory from satisfactory in a 2- class sampling plan or acceptable from satisfactory in a 3-class sampling plan.

M = Microbiological limit that separates unsatisfactory from satisfactory in a 3-class sampling plan.

Interpretation of Results:

2-Class Sampling Plan (where n, c and m are specified)	3-Class Sampling Plan (where n, c, m and M are specified)
2. Satisfactory, if all the values observed are ≤ m 3. Unsatisfactory, if one or more of the values observed are >m or more than c values are > m	2. Satisfactory, if all the values observed are ≤ m 3. Acceptable, if a maximum of c values are between m and M and the rest of the values are observed as ≤ m 4. Unsatisfactory, if one or more of the values observed are >M or more than c values are > m

[3]**Reference test methods:** The following test methods shall be applied as reference methods

Reference test methods- latest version shall apply. In case where an ISO method adopted by the BIS is specified (e.g IS XXXX / ISO YYYY), latest version of the ISO method (or its BIS equivalent, if available) shall apply. [63][Test methods prescribed in FSSAI Manual of Methods of Analysis of Foods (Microbiological Testing) may also be referred along with the IS/ISO methods specified for Process Hygiene Criteria and Food Safety Criteria.]

S.No	Parameter	Reference Test Method
1.	Aerobic Plate Count	Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms -- Part 1: Colony count at 30 degrees C by the pour plate technique- IS 5402 /ISO 4833
2.	Yeast and Mould Count	Method for Yeast and Mould Count of Foodstuffs and animal feeds- IS:5403 Microbiology of food and animal feeding stuff-Horizontal method for enumeration of Yeasts and Moulds- part 1: Colony count technique in products with water activity greater than 0.95.- IS0 21527-1: Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of Yeasts and Moulds -- Part 2: Colony count technique in products with water activity less than or equal to 0,95- **IS0 21527-2**
3.	*Staphylococcus aureus* and *Faecal streptococci*	Methods for detection of bacteria responsible for food poisoning :Part 2 Isolation, identification and enumeration of *Staphylococcus aureus* and *faecal streptococci*- IS 5887 : Part 2

		Methods for Detection of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration Of Coagulase-Positive Staphylococci/ (*Staphylococcus Aureus* and other species) **Section 1 Technique using baird-parker agar medium**- IS 5887 (Part 8/Sec 1: / ISO 6888-1: 1999 Methods For Detection Of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration Of Coagulase-Positive *Staphylococci*/ (*Staphylococcus Aureus* And Other Species) **Section 2 Technique using rabbit plasma fibrinogen agar medium**- IS 5887 (Part 8/Sec 2) / ISO 6888-2: 1999
4.	*Escherichia coli*	Methods for Detection of Bacteria Responsible for Food Poisoning - Part I : Isolation, Identification and Enumeration of *Escherichia coli*- IS 5887 : Part 1 Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of beta-glucuronidase-positive *Escherichia coli* -- Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide- ISO: 16649-2
5.	*Salmonella spp.*	Methods for Detection of Bacteria Responsible for Food Poisoning - Part 3 : General Guidance on Methods for the Detection of *Salmonell*- IS 5887 : Part 3 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of *Salmonella spp*.- ISO 6579
6.	*Listeria monocytogenes*	Microbiology of Food and Feeding Stuffs - Horizontal method for Detection and Enumeration of *Listeria Monocytogenes*-Part 1: Detection Method- IS 14988 : Part 1/ ISO: 11290-1 Microbiology of Food and Animal Feeding Stuffs - Horizontal Method for the Detection and Enumeration of *Listeria monocytogenes* - Part 2 : Enumeration Method. IS 14988 : Part 2/ ISO: 11290-2
7.	*Campylobacter spp*	Microbiology of Food and Animal Feeding Stuffs - Horizontal Method for the Detection and Enumeration of *Campylobacter spp*- Part 1 : Detection Method- ISO 10272-1

		Microbiology of food and animal feeding stuffs -- Horizontal method for detection and enumeration of *Campylobacter spp.* -- Part 2: Colony-count technique- **ISO 10272-2**
8.	*Sulphite-Reducing Bacteria*	Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of *Sulphite-Reducing Bacteria* growing under anaerobic conditions- ISO 15213
9.	[63][*Clostridium botulinum*]	Methods for Detection of Bacteria Responsible for Food Poisoning: Part 4 Isolation and Identification of *Clostridium perfringens (Clostridium welchii)* and *Costridium botulinum* and enumeration of *Clostridium perfringens*- IS:5887 Part 4 Microbiology of the food chain Polymerase Chain Reaction (PCR) for the detection of food borne pathogens –Detection of botulinum type A, B, E & F- neurotoxin Producing clostridia.- ISO-TS 17919.".]

[27][TABLE 6

MICROBIOLOGICAL REQUIREMENTS OF OTHER PRODUCTS

Food Products	Parameters	Limits
Baker's Yeast		
Baker's Yeast (Compressed)	Total bacterial count, CFU/g (on dry basis), Max	$7.5X10^5$
	E. coli, CFU	Absent in 1g
	Salmonella, Shigella species	Absent in 25 g
	Coliform count, CFU/g, Max	10
	Rope spore count, CFU/g, Max	10
Baker's Yeast (Dried)	Total bacterial count, CFU/g (on dry basis), Max	$8 X10^6$
	E. coli, CFU	Absent in 1g
	Salmonella, Shigella species	Absent in 25g
	Coliform count, CFU/g, Max	50
	Rope spore count, CFU/g, Max	100.]

[35][**Table 7**

Microbiological Requirements for Non-Carbonated Water Based Beverages (Non Alcoholic)

S.No.	Parameters	Limits
1.	Total Plate count per ml.	Not more than 50 CFU per ml.
2.	Yeast and mould count per ml	Not more than 2 cfu per ml.
3.	Coliform count	Absent in 100 ml.

Note:- Non-carbonated beverages shall be free from pathogens]

[73][**Table-8 Microbiological Standards of Eggs and Egg Products**

Table 8A: Microbiological Standards of Eggs and Egg Products – Process Hygiene Criteria

Sr. No.	Product Description	Aerobic Plate Count (cfu/g)				Enterobacteriacae (cfu/g)			
		Sampling Plan		Limit (cfu)		Sampling Plan		Limit (cfu)	
		n	c	m	M	n	c	m	M
1.	Table Egg	NA							
2.	Pasteurized Liquid egg products (whole, yolk or albumin liquid)	5	2	10^4	10^5	5	2	10^1	10^2
3.	Frozen /dried/ egg products	5	2	10^4	10^5	5	2	10^1	10^2
4.	Cooked/ready-to-eat egg products including mayonnaises	5	2	10^4	10^5	5	2	10^1	10^2
	Test Methods	**IS: 5402/ISO:4833**				**IS/ISO 7402/ISO 21528 Part 2**			

Table 8B

"Table 8B: Microbiological Standards of Eggs and Egg Products – Food Safety Criteria

Sr. No.	Product Description	*Salmonella*			*Listeria monocytogenes* (cfu/g)		
		Sampling Plan		Limit (cfu)	Sampling Plan		Limit (cfu)
		n	c	m M	n	c	m M
1.	Table Egg	NA					
2.	Pasteurized Liquid egg products (whole, yolk or albumin liquid)	5	0	Absent/25 g	5	0	Absent/25 g
3.	Frozen /dried/ egg products	5	0	Absent/25 g	5	0	10^2 /g
4.	Cooked/ready-to-eat egg products including mayonnaises	5	0	Absent/25 g	5	0	Absent/25 g
	Test Methods	**IS: 5887 Part3 / ISO:6579**			**IS: 14988, Part 1 & Part 2 / ISO 11290-1& 2**		

Definition.- Definition related to egg and egg products are the same as provided in Food Safety and Standards (Food Products Standards and Food Additives) Regulations 2011. The category "Table egg" shall be regulated in accordance with the good manufacturing practices and code of good hygiene practices notified under Schedule 4 of Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011.

Stage where the Microbiological Standards shall apply.- The microbiological standards with respect to the products categories specified in **Table-8A** (Process Hygiene Criteria) indicate the acceptable functioning of the production process. These are not to be used as requirements for releasing the products in the market. These are indicative values above which corrective actions are required in order to maintain the hygiene of the process in compliance with food law. These shall be applicable at the end of the manufacturing process. The microbiological standards in Table-8B (Food Safety Criteria) define the acceptability of a batch/lot and shall be met in respect of the products at the end of the manufacturing process and the products in the market during their shelf- life.

Action in case of unsatisfactory result:
In case of non-compliance in respect of process hygiene criteria specified in **Table- 8A,** the FBO shall:

- check and improve process hygiene by implementation of guidelines in Schedule 4 of Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations; and,
- Ensure that all food safety criteria as specified in **Table -8B** (Food Safety Criteria) are complied with.

Sampling Plans and Guidelines

For Regulator.- The sampling for different microbiological standards specified in **Table-8A and 8B** shall be ensured aseptically at manufacturing units and/or at retail points, as applicable, by a trained person with specialized knowledge in the field of microbiology following guidelines in the Food Safety and Standards (Food Products and Food Additives) Regulations, 2011 and ISO:707 **(Latest version**). The samples shall be stored and transported in frozen condition at -18°C(±2°C) or under refrigerated conditions at 2-5°C as applicable except the products that are recommended to be stored at room temperature by the manufacturer to enable initiation of analysis within 24 hours of sampling. Preservatives shall not be added to sample units intended for microbiological examination. The desired number of sample units as per sampling plan given in **Table-8A and 8B** shall be taken from same batch/lot and shall be submitted to the notified laboratory. **Three sets, each containing 'n' number of samples (n as defined in the sampling plan eg if n=5, then total number of samples to be drawn is 15) shall be drawn**. Each of these three sets shall be tested in three different accredited laboratories. The final decision shall be based on the results of three accredited laboratories. In the case of food safety criteria (Table 8B), results from all the three laboratories should indicate compliance with specified criteria. There will be no provision for retesting or resampling for microbiological testing. The testing in laboratory shall be ensured as per reference test methods given below in reference test methods for regulatory compliance.
For FBO.- Food Business Operator (FBO) shall perform testing as appropriate as per the microbiological standards in **Table-8A and 8B** to ensure validation and verification of compliance with the microbiological requirements. FBO shall decide themselvessubject to minimum prescribed under FSSR (Licensing and Registration of Food Businesses), the necessary sampling and testing frequencies to ensure compliance with the specified microbiological requirements. FBO may use analytical methods other than those described in reference test methods given below for in-house testing only. However, these methods shall not be applicable for regulatory compliance purpose.

Sampling Plan.-
The terms n, c, m and M used in this standard have the following meaning:
n = Number of units comprising a sample.
c = Maximum allowable number of units having microbiological counts above m for 2- class sampling plan and between m and M for 3- class sampling plan.
m = Microbiological limit that separates unsatisfactory from satisfactory in a 2- class sampling plan or acceptable from satisfactory in a 3-class sampling plan.
M = Microbiological limit that separates unsatisfactory from satisfactory in a 3-class sampling plan.

Interpretation of Results:

2-Class Sampling Plan (where n,c and m are specified)	**3-Class Sampling Plan (where n,c,m and M are specified)**
1. Satisfactory, if all the values observed are ≤ m 2. Unsatisfactory, if one or more of the values observed are >m	1. Satisfactory, if all the values observed are ≤ m 2. Acceptable, if a maximum of c values are between m and M and the rest of the values are observed as ≤m 3. Unsatisfactory, if one or more of the values observed are > M or more than prescribed c values are >m

Reference test methods: The following test methods shall be applied as reference methods. . Test methods prescribed in FSSAI Manual of Method of Analysis of Foods (Microbiological Testing) may also be referred along with the IS/ISO methods specified for Process Hygiene Criteria and Food Safety Criteria. Latest version of test methods shall apply. In case where an ISO method adopted by the BIS is specified (e.g. IS XXXX / ISO YYYY), latest version of the ISO method (or its BIS equivalent, if available) shall apply.

S.No.	Parameter	Reference Test methods
1.	Aerobic Plate Count	Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms -- Part 1: Colony count at 30 °C by the pour plate technique- IS 5402/ ISO:4833
2.	Enterobacteriaceae	Microbiology - General Guidance for the Enumeration of Enterobacteriaceae without Resuscitation - MPN Technique and Colony-count Technique- IS/ISO 7402 Microbiology of Food and Animal feeding stuff –Horizontal methods for the detection and enumeration of
3.	*Salmonella*	Methods for Detection of Bacteria Responsible for Food Poisoning - Part 3: General Guidance on Methods for the Detection of Salmonella- IS 5887 : Part 3 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of Salmonella spp.- ISO6579
4.	*Listeria monocytogenes*	Microbiology of the food chain -- Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of Listeria spp. -- Part 1: Detection method –ISO 11290-1 Microbiology of the food chain -- Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of Listeria spp. -- Part 2: enumeration method –ISO 11290-2 Microbiology of Food and Feeding Stuffs - Horizontal method for Detection and Enumeration of *Listeria Monocytogenes*, Part 1: Detection Method -IS 14988-1 Microbiology of Food and Animal Feeding Stuffs - Horizontal Method for the Detection and Enumeration of *Listeria monocytogenes*, Part 2: Enumeration Method- IS 14988-2]

Amendment for insertion of new provision

[77][Table-9 Microbiological Standards of Food Grain Products

Table 9A: Microbiological Standards of Food Grain Products – Process Hygiene Criteria

Sr. No.	Product Description	*Staphylococcus aureus* count (cfu/g)				*Enterobacteriaceae* count(cfu/g)			
		Sampling plan		Limit		Sampling plan		Limit	
		n	c	m	M	n	c	m	M
1.	Sprouted grains, sweet corn cob or packed wet grains for direct consumption	NA				5	2	10	10^2
2.	Batters and doughs (Ready to Cook)	5	2	10^2	10^3	5	2	10^2	10^3
3.	Fermented products other than batters and doughs (ready to cook) including bread, cakes and doughnuts, other ready to eat grain products, malted milk food, instant noodles, and pasta products	NA				5	2	10	10^2
	Test Methods	**IS:5887, Part 2 and IS 5887 part 8(Sec 1)/ ISO 6888-1 or IS:5887Part 8 (Sec2)/ISO 6888-2**				**IS/ISO 7402/ ISO 21528 Part 2**			

Table 9B: Microbiological Standards of Food Grain Products – Food Safety Criteria

Sr. No.	Product Description	*Salmonella*			*Listeria monocytogenes*		
		Sampling plan		Limit	Sampling plan		Limit
		n	c	m	n	c	m
1.	Sprouted grains, sweet corn cob or packed wet grains for direct consumption	5	0	Absent/25 g	5	0	Absent/25 g
2.	Batters and Doughs (Ready to Cook)	NA			NA		
3.	Fermented products other than batters and doughs (ready to cook) including bread, cakes, doughnuts, other ready to eat grain products, malted milk food, instant noodles* and pasta products*	5	0	Absent/25 g	5	0	Absent/25 g
	Test Methods	IS: 5887 Part3 / ISO:6579			IS: 14988, Part 1 / ISO 11290-1		

* Instant noodles and pasta products shall be tested for Salmonella but not for *Listeria monocytogenes.*

Definitions

Definitions related to Cereal and Cereal Products are as provided in FSS (Food Products Standards and Food Additives) Regulations 2011.

Stage where the Microbiological Standards shall apply:

The microbiological standards with respect to the product categories specified in **Table-9A** (Process Hygiene Criteria) indicate the acceptable functioning of the production process. These are not to be used as requirements for releasing the products in the market. These are indicative values above which corrective actions are required in order to maintain the hygiene of the process in compliance with the food law. These shall be applicable at the end of the manufacturing process. The Microbiological Standards in **Table-9B** (Food Safety Criteria) define the acceptability of a batch/lot and shall be met in respect of the products at the end of the manufacturing process and the products in the market during their shelf- life.

Action in case of unsatisfactory result:
In case of non-compliance in respect of process hygiene criteria specified in **Table- 9A,** the FBO shall:

- check and improve process hygiene by implementation of guidelines in Schedule 4 of FSS (Licensing and Registration of Food Businesses) Regulations; and,
- ensure that all food safety criteria as specified in **Table -9B** (Food Safety Criteria) are complied with

Sampling Plan and Guidelines:

For Regulator: The sampling for different microbiological standards specified in **Table-9A and 9B** shall be ensured aseptically at manufacturing units and/or at retail points, as applicable, by a trained person with specialized knowledge in the field of microbiology following guidelines in the Food Safety and Standards (Food Products and Food Additives) Regulations, 2011 and ISO: 707 **(Latest version**). The samples shall be stored and transported in frozen condition at -18°C (±2°C) or under refrigerated conditions at 2-5°C as applicable except the products that are recommended to be stored at room temperature by the manufacturer to enable initiation of analysis within 24 hours of sampling. Preservatives shall not be added to sample units intended for microbiological examination. The desired number of sample units as per sampling plan given in **Table-9A & 9B** shall be taken from same batch/lot and shall be submitted to the notified laboratory. Three sets, each containing 'n' number of samples (n as defined in the sampling plan eg if n=5, then total no. of samples is 15) shall be drawn. Each of these three sets shall be tested in three different accredited laboratories. The final decision shall be based on the results of three accredited laboratories. In the case of food safety criteria (Table 9B), results from all the three laboratories should indicate compliance with specified criteria. There will be no provision for retesting or resampling for microbiological testing. The testing in laboratory shall be done as per the methods given in the Table "Reference Test Methods"

For FBO: Food Business Operator (FBO) shall perform testing as appropriate as per the microbiological standards in **Table-9A & 9B** to ensure verification of compliance with the microbiological requirements. FBO shall decide themselves, subject to the minimum prescribed under FSSR (Licensing and Registration of Food Businesses), the necessary sampling and testing frequencies, to ensure compliance with the specified microbiological requirements. FBO may use analytical methods other than those described in reference test methods for in-house testing only. However, these methods shall not be applicable for regulatory compliance purpose.

Sampling Plan:

The terms n, c, m and M used in this standard have the following meaning:

n = Number of units comprising a sample.

c = Maximum allowable number of units having microbiological counts above m for 2- class sampling plan and between m and M for 3- class sampling plan.

m = Microbiological limit that separates unsatisfactory from satisfactory in a 2- class sampling plan or acceptable from satisfactory in a 3-class sampling plan.

M = Microbiological limit that separates unsatisfactory from satisfactory in a 3-class sampling plan.

Interpretation of Results:

2-Class Sampling Plan (where n,c and m are specified)	**3-Class Sampling Plan (where n,c,m and M are specified)**
1. Satisfactory, if all the values observed are ≤ m 2. Unsatisfactory, if one or more of the values observed are >m	1. Satisfactory, if all the values observed are ≤ m 2. Acceptable, if a maximum of c values are between m and M 3. Unsatisfactory, if one or more of the values observed are > M or more than prescribed c values are >m

Reference Test Methods: The following test methods shall be applied as Reference Test Methods. Test methods prescribed in FSSAI Manual of Method of Analysis of Foods (Microbiological Testing) may also be referred along with the IS/ISO methods specified for Process Hygiene Criteria and Food Safety Criteria.

Reference test methods- latest version shall apply. In case where an ISO method adopted by the BIS is specified (e.g IS XXXX / ISO YYYY), latest version of the ISO method (or its BIS equivalent, if available) shall apply.

S.No	Parameter	Reference Test methods
1.	Enterobacteriaceae count	Microbiology - General Guidance for the Enumeration of Enterobacteriaceae without Resuscitation - MPN Technique and Colony-count Technique- IS/ISO 7402 Microbiology of Food and Animal feeding stuff –Horizontal methods for the detection and enumeration of Enterobacteriaceae- Part 2:Colony- count method-ISO 21528-2
2.	*Staphylococcus Aureus*count	Methods for detection of bacteria responsible for food poisoning: Part 2 Isolation, identification and enumeration of *Staphylococcus aureus* and faecal streptococci- IS 5887 : Part 2 Methods for Detection of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration of Coagulase-Positive Staphylococci/ (*Staphylococcus aureus* and other species) **Section 1 Technique using baird-parker agar medium -** IS 5887 (Part 8/Sec 1: / ISO 6888-1: 1999) Methods For Detection Of Bacteria Responsible For Food Poisoning Part 8 Horizontal Method For Enumeration Of Coagulase-Positive Staphylococci/ (*Staphylococcus aureus* And Other Species) **Section 2 Technique using rabbit plasma fibrinogen agar medium-** IS 5887 (Part 8/Sec 2) / ISO 6888-2: 1999)
3.	*Salmonella*	Methods for Detection of Bacteria Responsible for Food Poisoning - Part 3: General Guidance on Methods for the Detection of Salmonella- IS 5887 : Part 3 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of Salmonella spp.- ISO 6579
4.	*Listeria monocytogenes*	Microbiology of the food chain -- Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of Listeria spp. -- Part 1: Detection method –ISO 11290-1 Microbiology of Food and Feeding Stuffs - Horizontal method for Detection and Enumeration of Listeria Monocytogenes, Part 1: Detection Method -IS 14988-1]

[Amendment in force from 15th November, 2021; FBOs to comply with the provisions by 1st June, 2022]

[71][APPENDIX C

I. PROCESSING AIDS CATEGORIES:

(1) Antifoaming Agents: Substances that reduce and hinder the formation of foam during processing of liquid food products.

(2) Catalyst: Substances that increase the rate of a chemical reaction without itself undergoing any permanent chemical change.

(3) Clarifying Agents and Filtration Agents: Substances that are used to remove suspended solids from liquids by inducing flocculation and those substances which aid in the process of filtration.

(4) Lubricants, Release and Antistick Agents: Substances which help to reduce friction between food contact surfaces and substances that provide critical barrier between molding surface and the substrate facilitating separation of cured part from the mold.

(5) Microbial Control Agents, Microbial Nutrients and Microbial Nutrient Adjuncts

(a) Microbial Control Agents: Substances that can be used to inactivate target organisms in the processing of foods.

(b) Microbial Nutrients and Microbial Nutrient Adjuncts: Substances that can be used to enhance the growth of the microbial culture intended to be used in food processing.

(6) Solvent for Extraction and Processing: Processing aids that help in the separation of a particular substance from a mixture by dissolving that substance in a solvent that will dissolve it, but which will not dissolve any other substance in the mixture.

(7) Bleaching, Washing, Peeling and Denuding Agents: Substances that can be used in making food products white or colorless and substances that aid in surface treatment (washing, denuding and peeling) of food specified in these regulations.

(8) Flocculating Agents: Substances that promote flocculation by forming colloids and other suspended particles in liquids to aggregate and forming a floc. Flocculants are used to improve the sedimentation or filterability of small particles.

(9) Contact Freezing and Cooling Agents: Substances that can cause rapid freezing on contact with food.

(10) Desiccating Agent: Substances that extract water and prevent the formation of lumps during manufacturing of food products. They are either soluble or insoluble substances that adsorb water due to their chemical properties.

(11) Enzymes: These are macromolecular biological catalysts which accelerate chemical reactions in the treatment or processing of raw materials, foods, or ingredients. The enzymes may be used as a processing aid to perform any technological purpose if the enzyme is derived from the corresponding source specified in the table.

(12) Generally permitted processing aids

This category includes processing aids which have different technological functions. They shall be used as per the conditions specified in the corresponding table under these regulations.

II. USE OF PROCESSING AIDS IN FOOD PRODUCTS:

The processing aids listed in Table 1 to Table 12 may be used in the course of manufacture of food specified in the corresponding table, provided the final food contains not more than the corresponding residue level specified in the Table.

TABLE 1: ANTIFOAMING AGENTS

S. No.	Name of the processing aid	Product Category	Residual level (mg/kg) (Not more than)
1.	Coconut oil	Juices	GMP
2.	Hydrogenated coconut oil	Confectionary	15
		Vegetable protein	GMP
3.	Polydimethylsiloxane (INS 900a)	Beer, fats & oils, vegetable protein, Juices, Potato processing	10
4.	Polyethylene glycol (INS 1521)	All foods	GMP
5.	Propylene glycol (INS 1520)	All foods	GMP
6.	Sorbitan monolaurate (INS 493)	All foods	1
7.	Sorbitan monooleate (INS 494)	All foods	1
8.	Vegetable fatty acid esters	Juices	GMP

TABLE 2: CATALYST

S. No.	Name of the processing aid	Product Category	Residual Level (mg/kg) Not more than
1	Chromium (excluding chromium VI)	Hydrogenated vegetable oil	0.1
2.	Copper	Hydrogenated vegetable oil	0.1
3.	Molybdenum	Hydrogenated vegetable oil	0.1

4.	Nickel	Polyols	1
		Hardened oil	0.8
		Hydrogenated vegetable oil	1.5
5.	Potassium	Interesterified vegetable oil	1
6.	Potassium ethoxide	Interesterified vegetable oil	1
7.	Sodium	Interesterified vegetable oil	1
8.	Sodium ethoxide	Interesterified vegetable oil	1
9.	Sodium methoxide	Interesterified vegetable oil	1

TABLE 3: CLARIFYING AGENTS AND FILTRATION AIDS

S. No.	Name of the processing aid	Product Category	Residual level (mg/kg) (Not more than)
1.	Acid clays of montmorillonite	Fruit or vegetable juices, fruit nectars, syrups and wine	GMP
2.	Chitosan sourced from *Aspergillus niger*	Wine, beer, cider, spirits and food grade ethanol	GMP
3.	Chloro methylated aminated styrene-divinyl benzene resin	Sugar	1
4.	Co-extruded polystyrene and polyvinyl polypyrrolidone	Fruit or vegetable juices, fruit nectars, syrups and wine	1
5.	Copper sulphate (INS 519)	Fruit or vegetable juices, fruit nectars, syrups and wine	GMP
6.	Diatomaceous earth	Fruit or vegetable juices, Alcoholic beverages including low alcoholic and alcohol-free counterparts (as filter powder)	GMP
7.	Fish collagen, including isinglass	Fruit or vegetable juices, fruit nectars, syrups and Alcoholic beverages including low alcoholic and alcohol-free counterparts	GMP
8.	Kaolin	Fruit or vegetable juices, fruit nectars, syrups and wine	GMP
9.	Magnesium oxide (INS 530)	Fruit or vegetable juices, fruit nectars, syrups and wine	GMP
10.	Perlite	Starch hydrolysis	GMP
11.	Polyvinyl polypyrrolidone (INS 1201)	Fruit or vegetable juices, fruit nectars, syrups and wine	GMP

12.	Shellac, bleached (INS 904)	Fruit or vegetable juices, fruit nectars, syrups and wine	GMP
13.	Synthetic magnesium silicate (INS 553(i))	Edible oils	GMP

[73][TABLE 4: LUBRICANTS, RELEASE AND ANTISTICK AGENTS

S. No.	Name of the processing aid	Product Category	Residual level (mg/kg) (Not more than)
1.	Acetylated mono- and diglycerides (INS 472a)	All foods	100
2.	Bees wax (INS 901)	All foods	GMP
3.	Calcium carbonate (INS 170 (i))	All foods	GMP
4.	Calcium and sodium salts of stearic acid	Confectionery	GMP
5.	Carnauba wax (INS 903)	Confectionery	GMP
6.	Coconut Oil	Confectionery, bakery wares, salts, spices, soups, cereal products	GMP
7.	Glycerin/Glycerol (INS 422)	All foods	GMP
8.	Hydrogenated palm kernel oil (HPKO)	Confectionery and bakery wares	GMP
9.	Hydrogenated vegetable oil (HVO)	All foods	GMP
10.	Icing sugar	Confectionery	GMP
11.	Lecithin (INS 322 (i))	All foods	GMP
12.	Liquid paraffin (INS 905 e)	Confectionery	GMP
13.	Magnesium stearate (INS 470(iii))	Confectionery	GMP
14.	Medium chain Triglyceride (MCT) (C6- C12)	Confectionery, bakery wares and fruit Jelly	GMP

15.	Oleic acid	All foods	GMP
16.	Palm oil/Palmolein	Confectionery, bakery wares, Salts, spices, soups and cereal products	GMP
17.	Rice starch	Confectionery	GMP
18.	Sunflower oil	Confectionery, bakery wares, Salts, spices, soups and cereal products	GMP
19.	Soybeanoil	Confectionery and bakery wares	GMP
20.	Thermally oxidised soya-bean oil (INS 479)	All foods	320
21.	White mineral oil (INS 905e)	All foods	GMP]

TABLE 5: MICROBIAL CONTROL AGENTS, MICROBIAL NUTRIENTS AND MICROBIAL NUTRIENT ADJUNCTS

MICROBIAL CONTROL AGENT			
S. No.	**Name of the processing aid**	**Product Category**	**Residual Level (mg/kg) (Not more than)**
1.	Dimethyl dicarbonate* (INS 242)	Wine, Fruits and vegetable juices, Water based flavoured drinks	Non-detectable
2.	Lysozyme (INS 1105)	Alcoholic beverages including low alcoholic and alcohol-free counterparts	GMP
3.	Octanoic acid	Meat, fruit and vegetables	GMP
4.	Sodium metasilicate (INS 550 (ii))	Meat and poultry carcasses and cuts	GMP
5.	Sodium chlorite	Meat, fish, fruit and vegetables	GMP
6.	Salmonella phage preparation (S16 and FO1a)	Raw meat and poultry	GMP

**** Maximum usage level shall not be more than 200 mg/kg for wine, 250 mg/kg for fruits and vegetable juices and its products and 250 mg/kg for water based flavoured drinks. Residue shall be analyzed as per method specified in "Joint FAO/WHO Expert Committee on Food Additives (JECFA) specification of Dimethyl dicarbonate".***

MICROBIAL NUTRIENTS AND MICROBIAL NUTRIENT ADJUNCTS (for sustaining microbial growth)		
S. No.	**Name of the processing aid**	**Residual Level (mg/kg) (Not more than)**
7.	Adenine	GMP
8.	Adonitol	GMP
9.	Arginine	GMP
10.	Asparagine	GMP
11.	Aspartic acid	GMP
12.	Ammonium sulphate	GMP
13.	Ammonium sulphite	GMP
14.	Benzoic acid	GMP
15.	Biotin	GMP
16.	Calcium pantothenate	GMP
17.	Calcium propionate (INS 282)	GMP
18.	Copper sulphate (INS 519)	GMP
19.	Cysteine	GMP
20.	Cysteine monohydrochloride	GMP
21.	Dextran	GMP
22.	Ferrous sulphate	GMP
23.	Glutamic acid	GMP
24.	Glycine	GMP
25.	Guanine	GMP
26.	Histidine	GMP
27.	Hydroxyethyl starch	GMP
28.	Inosine	GMP
29.	Inositol	GMP
30.	Manganese chloride	GMP
31.	Manganese sulphate	GMP
32.	Niacin	GMP
33.	Nitric acid	GMP
34.	Pantothenic acid	GMP
35.	Peptone	GMP
36.	Phytates	GMP
37.	Polyvinylpyrrolidone (INS 1201)	GMP
38.	Pyridoxine hydrochloride	GMP
39.	Riboflavin (INS 101 (i))	GMP
40.	Sodium formate	GMP
41.	Sodium molybdate	GMP
42.	Sodium tetraborate	GMP

43.	Thiamine	GMP
44.	Threonine	GMP
45.	Trisodium orthophosphate	GMP
46.	Uracil	GMP
47.	Xanthine	GMP
48.	Zinc chloride	GMP
49.	Zinc sulphate	GMP

TABLE 6: SOLVENT FOR EXTRACTION AND PROCESSING

S. No.	Name of the processing aid	Product Category	Residual Level (mg/kg) (Not more than)
1.	Acetone	Flavourings	30
		Spice oleoresins	30
		Colours	2
		Vegetable oils	0.1
		Other foods	0.1
2.	Benzyl alcohol	Fatty acids, flavourings, colours	GMP
3.	Butanol	Fatty acids, flavourings, colours	10
		Spice oleoresins	2
4.	Butan-2-ol	Spice oleoresins	2
5.	Carbon dioxide (INS 290)	Flavourings	GMP
		Spice oleoresins	GMP
6.	Cyclohexane	Flavourings, vegetable oils	1
7.	Dibutyl ether	Flavourings	2
8.	Diethyl ether	Flavourings, colors	2
		Spice oleoresins	2
9.	Dimethyl ether	Flavourings	2
10.	Ethyl acetate	Flavourings	10
		Spice oleoresins	50
11.	Ethyl alcohol	Spice oleoresins	GMP

		Other Foods	GMP
12.	Ethylene dichloride (1,2 Dichloroethane)	Spice oleoresins	30
13.	Glycerol diacetate	All foods	GMP
14.	Glycerol monoacetate	All foods	GMP
15.	Heptane	Flavourings	1
		Vegetable oils	
16.	Hexane	Flavourings, vegetable oils	5
		Spice oleoresins	25
		Chocolate and chocolate products	1
17.	Isobutane	Flavourings	1
		Other foods	0.1
18.	Isopropyl alcohol	Spice oleoresins	50
		Other foods	10
19.	Methyl alcohol	Spice oleoresins	50
20.	Methylene chloride (Dichloromethane)	Decaffeinated tea	2
		Decaffeinated coffee	10
		Flavourings	2
		Spice oleoresins	30
		Vegetable oils	0.02
21.	Methyl ethyl ketone (butanone)	Fatty acids, flavourings, colourings, decaffeination of coffee, tea	2
22.	Methyl tert-butyl ether	Spice oleoresins	2
23.	Propane	Flavourings	1
		Edible oils	0.1
24.	Propan-1-ol	Spice oleoresins	1
25.	Toluene	Flavourings	1
26.	Water	Spice oleoresins	GMP

TABLE 7: BLEACHING, WASHING, DENUDING AND PEELING AGENTS

S. No.	Name of the processing aid	Product Category	Residual level (mg/kg) (Not more than)
1.	Ammonium persulphate (INS 923)	Yeast	GMP
2.	Benzoyl peroxide (INS 928)	Fruits and vegetables	40 (as benzoic acid)
3.	Calcium hypochlorite	Fruits and vegetables, flours and starches, water	1 (as available chlorine)
4.	Carbonic acid	Tripe	GMP
5.	Chlorine (INS 925)	Fruits and vegetables, flours and starches	1 (as available chlorine)
6.	Chlorine dioxide	Fruits and vegetables, flours and starches	1 (as available chlorine)
7.	Diammonium hydrogen orthophosphate	Canned fruits and vegetables	GMP
8.	Hydrogen peroxide	Fruits and vegetables, flours and starches	5
9.	Peracetic acid	Fruits and vegetables	GMP
10.	Sodium bisulphite	Root and tuber vegetables (not meant for those intended to be served or sold raw/fresh to consumers)	GMP
11.	Sodium hypochlorite	Fruits and vegetables, flours and starches	1 (as available chlorine)
12.	Sodium gluconate (INS 576)	Tripe	GMP
13.	Sodium laurate	Fruits and vegetables	GMP
14.	Sodium/ Potassium metabisulphite	Root and tuber vegetables (not meant for those intended to be served or sold raw/fresh to consumers)	25
15.	Sodium peroxide	Root and tuber vegetables	5

TABLE 8: FLOCCULATING AGENTS

S. No.	Name of the processing aid	Product Category	Residual level mg/kg (Not more than)
1.	Citric acid (INS 330)	Unripened cheese – Paneer and Chhana	GMP
2.	Glucono delta lactone (INS 575)		
3.	Lactic acid (INS 270)		
4.	Malic acid (INS 296)		
5.	Sour whey		
6.	Vinegar		

TABLE 9: CONTACT FREEZING AND COOLING AGENTS

S. No.	Name of the processing aid	Product Category	Residual level (mg/kg) (Not more than)
1	Liquid Nitrogen (INS 941)	Dairy-based desserts - Ice cream	GMP

TABLE 10: DESICCATING AGENTS

S. No.	Name of the processing aid	Product Category	Residual level (mg/kg) (Not more than)
1	Corn starch	Icing sugar	GMP

[73][TABLE 11: ENZYMES (for treatment or processing of raw materials, foods, or ingredients)

S.No.	Name of the Enzyme* [in order of Enzyme Commission (EC) number]	Source*	Residual level (mg/kg) (Not more than)

1.	Glucose oxidase (EC No. 1.1.3.4)	*Aspergillusniger*	GMP
		Aspergillusoryzae	
2.	Catalase (EC No. 1.11.1.6)	*Aspergillusniger*	GMP
3.	Glycero-phospholipid cholesterol acyltransferase (EC No. 2.3.1.43)	*Bacillus licheniformis*	GMP
4.	Transglutaminase (EC No. 2.3.2.13)	*Streptomyces mobaraensis*	GMP
5.	Lipase triacylglycerol (EC No. 3.1.1.3)	*Rhizopusoryzae*	GMP
		Fusariumoxysporum	
		Thermomyceslanuginosus	
		Rhizopusniveus	
		Carica papaya	
		Rhizomucormiehei	
		Aspergillusniger	
		Candida rugosa(*cylindracea*)	
		Pregastric bovine (calf) tissue	
		Pregastric ovine (lamb) tissue	
		Penicilliumroquefortii	
		Porcine pancreas	
		Mucorjavanicus (*Mucorcircinelloides f. circinelloides*)	
		Rice bran	
6.	Phospholipase A2 (EC No. 3.1.1.4)	*Streptomyces violaceoruber*	GMP
7.	Lysophospholipase (EC No. 3.1.1.5)	*Aspergillusniger*	GMP
8.	Pectin esterase (EC No. 3.1.1.11)	*Aspergillusniger*	GMP
9.	Acylglycerol lipase (EC No. 3.1.1.23)	*Penicilliumcamembertii*	GMP
8.	Phospholipase A1 (EC No. 3.1.1.32)	*Aspergillusniger*	GMP
9.	Phytase (EC No. 3.1.3.8)	*Aspergillusniger*	GMP
10.	Phosphodiesterase I (EC No. 3.1.4.1)	*Leptographiumprocerum*	GMP
11.	Phospholipase D	*Streptomyces cinnamoneus*	GMP

	(EC No. 3.1.4.4)		
12.	Hemicellulase (EC No. 3.2.1)	*Aspergillusniger*	GMP
		Trichodermareesei/ longibrachiatum	
13.	Alpha amylase (EC No. 3.2.1.1)	*Aspergillusoryzae*	GMP
		Aspergillusniger	
		Bacillus licheniformis	
		Bacillus amyloliquefaciens	
		Bacillus subtilis	
		Bacillus stearothermophilus	
		Cereal (barley) malt	
14.	Beta amylase (EC No. 3.2.1.2)	Cereal (barley) malt	GMP
		Bacillus amyloliquefaciens	
		Hordeumvulgare (barley)	
15.	Glucan 1,4-α-glucosidase (or Glucoamylase or acid maltase) (EC No. 3.2.1.3)	*Aspergillusniger*	GMP
		Aspergillusoryzae	
		Trichodermareesei	
		Rhizopusoryzae	
16.	Cellulase (4-β-D-glucan 4-glucanohydrolase) (EC No. 3.2.1.4)	*Penicilliumfuniculosum*	GMP
		Aspergillusniger	
		Humicolainsolens	
		Rasamsonia (Talaromyces) emersonii	
		Trichodermareesei	
17.	Beta-glucanase (endo-beta glucanase or endo-1,3-beta- glucanase) (EC No. 3.2.1.6)	*Aspergillusniger*	GMP
		Bacillus amyloliquefaciens	
		Rasamsonia (Talaromyces) emersonii	
		Trichodermareesei	
		Aspergillusaculeatus	
		Penicilliumfuniculosum	
		Bacillus subtilis	
		Trichodermaharzianum	
		Disporotrichumdimorphosporum	
		Humicolainsolens	
18.	Inulinase (EC No. 3.2.1.7)	*Aspergillusniger*	GMP
19.	Endo-1,4-beta-xylanase (EC No. 3.2.1.8)	*Aspergillusniger*	GMP

		Bacillus licheniformis	
		Disporotrichumdimorphosporum	
		Rasamsonia (Talaromyces) emersonii	
		Trichodermareesei(longibrachiatum)	
		Humicolainsolens	
20.	Dextranase (EC No. 3.2.1.11)	*Chaetomiumerraticum*	GMP
21.	Polygalacturonase (pectinase) (EC No. 3.2.1.15)	*Aspergillusniger*	GMP
		Aspergillusaculeatus	
22.	Lysozyme (EC No. 3.2.1.17)	*Gallus gallus* egg	GMP
23.	Alpha-glucosidase (EC No. 3.2.1.20)	*Aspergillusniger*	GMP
		Trichodermareesei	
24.	Beta-glucosidase (EC No. 3.2.1.21)	*Aspergillusniger*	GMP
		Kluyveromyceslactis	
		*Trichodermareesei/ longibrachiatum*CL 847	GMP
25.	Alpha-galactosidase (melibiase) (EC No. 3.2.1.22)	*Aspergillusoryzae*	GMP
		Aspergillusniger	GMP
		Morterellavinacea	GMP
		Saccharomyces carlsbergensis	GMP
26.	Beta-galactosidase (lactase) (EC No. 3.2.1.23)	*Kluyveromyceslactis*	GMP
		Bacillus circulans	
		Saccharomyces sp.	
		Aspergillusniger	
		Aspergillusoryzae	
27.	Beta- fructofuranosidase (invertase or saccharase) (EC No. 3.2.1.26)	*Saccharomyces cerevisiae*	GMP
		Kluyveromycesfragilis	
		Saccharomyces carlsbergensis	
		Saccharomyces cerevisiae	
28.	Trehalase (EC No. 3.2.1.28)	*Trichodermareesei*	GMP

29.	Endo-1,3-β-xylanase (EC No. 3.2.1.32)	*Humicolainsolens*	GMP
30.	Pullunase (EC 3.2.1.41)	*Bacillus acidopullulyticus*	GMP
		Bacillus brevis	
		Bacillus circulans	
		Bacillus naganoensis	
		Klebsiellaaerogenes	
31.	Alpha Arabinofuronosidase (EC No. 3.2.1.55)	*Aspergillusniger*	GMP
32.	Glucan1,3-betaglucosidase (EC No. 3.2.1.58)	*Trichodermaharzianum*	GMP
33.	Mannanase (Mannan endo-1,4-beta-mannosidase) (EC No. 3.2.1.78)	*Trichodermareesei*	GMP
		Aspergillusniger	GMP
34.	Protease (Bacteria) (EC No. 3.4)	*Bacillus amyloliquefaciens*	GMP
		Bacillus licheniformis	
		Bacillus subtilis	
		Geobacilluscaldoproteolyticus	
35.	Protease (Fungi) (EC No. 3.4)	*Aspergillusniger*	GMP
		Aspergillusoryzae	
36.	Aminopeptidase (EC No. 3.4.11.1)	*Aspergillusoryzae*	GMP
37.	Serine protease (subtilisin) (EC No. 3.4.21.62)	*Bacillus licheniformis*	GMP
38.	PIII-type proteinase (Lactocepin) (EC No. 3.4.21.96)	*Lactococcuslactis subsp. cremoris (strain SK11)*	GMP
39.	Papain (EC No 3.4.22.2)	*Carica papaya*	GMP
40.	Ficin (EC No. 3.4.22.3)	Figs	GMP
41.	Bromelain (EC No 3.4.22.33)	*Ananascomosus/bracteatus*	GMP
42.	Chymosin (EC No. 3.4.23.4)	*Kluyveromyceslactis*	GMP
43.	Endo(thia)peptidase (EC No. 3.4.23.22)	*Cryphonectria (Endothia) parasitica*	GMP

44.	Mucorpepsin (EC No. 3.4.23.23)	*Rhizomucormiehei*	GMP
45.	Metalloproteinase (Bacillolysin) (EC No. 3.4.24.28)	*Bacillus amyloliquefaciens*	GMP
46.	AMP deaminase (EC No. 3.5.4.6)	*Aspergillusmelleus*	GMP
		Streptomyces murinus	
47.	Pectin lyase (EC No. 4.2.2.10)	*Aspergillusniger*	GMP
48.	Glucose isomerase (or xylose isomerase) (EC No. 5.3.1.5)	*Streptomyces rubiginosus*	GMP
		Streptomyces murinus	GMP
		Streptomyces olivaceus	
		Streptomyces olivochromogenes	
		Microbacteriumarborescens	
		Actinoplanesmissouriensis	

∗*All enzymes are from non-genetically modified sources*]

[73][TABLE 12: GENERALLY PERMITTED PROCESSING AIDS

S No.	**Name of the processing aid**	**Functional/ Technological Purpose**	**Product Category**	**Residue Level (mg/kg) (Not more than)**
1.	Activated carbon	Adsorbent, decolourizing agent	Sugars, oils and fats, juices	GMP
2.	Ammonium carbonate (INS 503(i))	pH control agent	Cocoa mixes (powders) and cocoa mass/cake	GMP
3.	Ammonium hydroxide (INS 527)	Acidity regulator	All foods	GMP
4.	Ammonium sulphate	Decalcification agent	Edible casings	GMP
5.	Amino acids	Microbial nutrient		GMP

6.	Alum (Aluminiumsulphate or Potassium aluminiumsulphate)	Coagulant	Alcoholic beverages including low alcoholic and alcohol free counterparts	
7.	Argon (INS 938)	Propellent and packaging gas	All foods	GMP
8.	Beta-cyclodextrin (INS 459)	Encapsulating and thickening agent	Butter	GMP
9.	Biotin	Microbial nutrient	All foods	GMP
10.	Bone phosphate (INS 542)	Emulsifier, moisture retention agent	All foods except milk and milk products	GMP
		Sequestrant	All foods	GMP
11.	Calcium carbonate (INS 170 (i))	Polishing agent	All foods	GMP
12.	Calcium chloride	Buffering agent	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP
13.	Calcium sulfate	Buffering agent		GMP
14.	Calcium and sodium salts of stearic acid	Polishing agent	Confectionery	GMP
15.	Carbon dioxide (INS 290)	Gassing/aerating agent	All foods	GMP
16.	Citric acid (INS 330)	Sequestrant	Oils & fats	GMP
17.	Chlorine dioxide	Water treatment	Alcoholic beverages including low alcoholic and	1 (as available chlorine)

			alcohol free counterparts	
18.	Ethyl acetate	Cell disruption of yeast	Yeast	GMP
19.	Ethyl Alcohol	Carrier solvent ,flavouring agent	All foods	GMP
20.	Ethylene diamine tetra acetic acid	Metal sequestrant	Edible fats and oils and related products	GMP
21.	Furcellaran (INS 407)	Thickener, gelling agent, stabilizer, emulsifier	All foods	GMP
22.	Gibberellic acid	Malting	Cereals	GMP
23.	Glucono delta lactone (GDL) (INS 575)	Raising agent, sequestrant	Unripened cheese – Paneer and Chhana	GMP
24.	Glycerin/ Glycerol (INS 422)	Polishing agent	All foods	GMP
25.	Hydrochloric acid (INS 507)	Protein hydrolysing agent	Protein products	GMP
26.	Hydrogenated glucose syrups (INS 965 (ii))	Sweetener, humectant, texturizer, stabilizer, bulking agent	All foods	GMP
27.	HVO (Hydrogenated vegetable oil)	Lubricant for conveyor belts for countline products	All foods	GMP
28.	Icing sugar	Polishing agent	Confectionery	GMP
29.	Indole acetic acid	Malting	Cereals	GMP
30.	Isopropyl alcohol	Glazing agent	All foods	GMP

31.	L-Cysteine (or HCl salt)	Dough conditioner	Flour products	75
32.	Lactic acid	Acidity regulator	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP
33.	Liquified anhydrous ammonia	Bacterial nutrient	All foods	GMP
34.	Liquid paraffin (INS 905 e)	Polishing agent	Confectionery	GMP
35.	Magnesium hydroxide (INS 528)	pH control agent	All foods	GMP
36.	Magnesium stearate (INS 470(iii))	Polishing agent	Confectionery	GMP
37.	Mono and diglycerides of fatty acids (INS 471)	Emulsifier in extrusion	Extruded foods	GMP
38.	Nicotinamide	Microbial nutrient	All foods	GMP
39.	Nitrogen gas (INS 941)	Foaming agent	All foods	GMP
40.	Oak dust/chips	Ageing agent	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP
41.	Oxygen (INS 948)	Propellant	All foods	GMP
		Aerating agent	Alcoholic beverages including low alcoholic and	GMP

			alcohol free counterparts	
42.	Paraffin	Coating agent	Cheese and cheese products	GMP
43.	Phospholipids (INS 322 (i))	Emulsifier, antioxidant	All foods	GMP
44.	Phosphoric acid (INS 338)	Acidulant, sequestrant, synergist for antioxidants	All foods	GMP
		Buffering agent	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP
45.	Polyethylene glycols (INS 1521)	Carrier solvent, excipient	All foods	GMP
46.	Polyglycerol esters of interesterifiedricinoleic acid (INS 476)	Emulsifier	All foods	GMP
47.	Polyoxyethylene 40 stearate (INS 431)	Emulsifier	All foods	GMP
48.	Polyvinyl acetate	Preparation of waxes	Cheese and cheese products	GMP
49.	Potassium carbonate (INS 501(i))	pH control agent	Cocoa mixes (powders) and cocoa mass/cake	GMP
50.	Potassium dihydrogen phosphate (INS 340)	pH control agent	All foods	GMP
51.	Potassium hydroxide	pH control agent	All foods	GMP

	(INS 525)			
52.	Potassium metabisulphite (INS 224)	Antioxidant	Alcoholic beverages including low alcoholic and alcohol free counterparts	Maximum usage level shall not be more than 50 mg/kg
53.	Propylene glycol alginate (INS 405)	Stabilizer, thickener, emulsifier	All foods	GMP
		Foam stabilizer	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP
54.	Rice starch	Polishing agent	Confectionery	GMP
55.	Salt (NaCl)	Ion exchange	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP
56.	Silica (INS 551)	Anticaking agent	All foods	GMP
		Soap absorbing agent	Edible vegetable oils	GMP
		Free flowing agent	All foods	GMP
57.	Sodium acid pyrophosphate (SAPP)	Prevention of darkening of frozen uncooked French fries	Frozen vegetables	GMP
58.	Sodium bicarbonate (INS 500 (ii))	pH control agent	All foods	GMP

59.	Sodium calcium polyphosphate silicate (INS 452 (i))	Stabilizer, leavening agent, emulsifier, nutrient	All foods	GMP
60.	Sodium carbonate (INS 500(i))	pH control agent	All foods	GMP
61.	Sodium dihydrogen phosphate (INS 339)	pH control agent	All foods	GMP
62.	Sodium Hydroxide (INS 524)	pH control agent	All foods	GMP
63.	Sodium Hypochlorite	Water treatment	Alcoholic beverages including low alcoholic and alcohol free counterparts	1 (as available chlorine)
64.	Sodium metabisulphite (INS 223)	Dough conditioner	Flour products	60
		Softening agent	Corn kernel	60
		Reducing agent	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP
65.	Sodium silicate (INS 550 (i))	Anticaking agent	All foods	GMP
66.	Sodium sulphite	Dough conditioner	Flour products	60
67.	Sulphuric Acid (INS 513)	pH control agent	All foods	GMP
68.	Sulphurous acid	Softening agent	Corn kernel	GMP

69.	Sulphur dioxide (INS 220)	Control of nitrosodimethylamine in malting	Malting	750
70.	Tannic Acid (INS 181)	Clarifying agent, flavouring agent, flavour adjunct	Juices	GMP
71.	Vitamin B12	Microbial nutrient	All foods	
72.	Vitamin C	Microbial nutrient	All foods	
73.	Yeast	Fermenting Agent	Alcoholic beverages including low alcoholic and alcohol free counterparts	GMP.]
74.	Zinc sulphate	Mineral Salt		

International Numbering System (INS) for Food Additives-

The following list is only for identifying the food additive and their synonyms as published by the Codex on 23.11.2005 Codex. For the latest updates, JECFA/Codex website may be referred to (www.codexalimentarius.net, www.codexalimentarius.net/web/jecfa.jsp)

A. List sorted by INS number

Sl. No.	**INS Number**	**Food Additive Name**	**Technical functions**
1	*2*	*3*	*4*
1.	100	Curcumins	Colour
2.	100(i)	Curcumin	Colour
3.	100(ii)	Turmeric	Colour
4.	101	Riboflavins	Colour
5.	101(i)	Riboflavin	Colour
6.	101(ii)	Riboflavin 5'-phosphate, sodium	Colour
7.	102	Tartrazine	Colour
8.	103	Alkanet	Colour

9.	104	Quinoline yellow	Colour
10.	107	Yellow 2G	Colour
11.	110	Sunset yellow FCF	Colour
12.	120	Carmines	Colour
13.	121	Citrus red 2	Colour
14.	122	Azorubine / Carmoisine	Colour
15.	123	Amaranth	Colour
16.	124	Ponceau 4R	Colour
17.	125	Ponceau SX	Colour
18.	127	Erythrosine	Colour
19.	128	Red 2G	Colour
20.	129	Allurared AC/Fast Red E	Colour
21.	130	Manascorubin	Colour
22.	131	Patent blue V	Colour
23.	132	Indigotine	Colour
24.	133	Brilliant blue FCF	Colour
25.	140	Chlorophyll	Colour
26.	141	Copper chlorophylls	Colour
27.	141(i)	Chlorophyll copper complex,	Colour
28.	141(ii)	Chlorophyll copper complex, sodium and potassium Salts	Colour
29.	142	Green S	Colour
30.	143	Fast green FCF	Colour
31.	150a	Caramel I-plain	Colour
32.	150b	Caramel II – caustic sulphite process	Colour
33.	150c	Caramel III – ammonia process	Colour

34.	150d	Caramel IV-ammonia sulphite Process	Colour
35.	151	Brilliant black PN	Colour
36.	152	Carbon black (hydrocarbon)	Colour
37.	153	Vegetable carbon	Colour
38.	154	Brown FK	Colour
39.	155	Brown HT	Colour
40.	160a	Carotenes	Colour
41.	160a(i)	Beta-carotene (synthetic)	Colour
42.	160a(ii)	Natural extracts	Colour
43.	160b	Annatto extracts	Colour
44.	160c	Paprika Oleoresins	Colour
45.	160d	Lycopene	Colour
46.	160e	Beta-apo-carotental	Colour
47.	160f	Beta-apo-8'-carotenic acid, methyl or ethyl ester	Colour
48.	161a	Flavoxanthin	Colour
49.	161b	Lutein	Colour
50.	161c	Krytoxanthin	Colour
51.	161d	Rubixanthin	Colour
52.	161e	Violoxanthin	Colour
53.	161f	Rhodoxanthin	Colour
54.	161g	Canthaxanthin	Colour
55.	162	Beet red	Colour
56.	163	Anthocyanins	Colour
57.	163(i)	Anthocyanins	Colour
58.	163(ii)	Grape skin extract	Colour

59.	163(iii)	Blackcurrant extract	Colour
60.	164	Gardenia yellow	Colour
61.	166	Sandalwood	Colour
62.	170	Calcium carbonates	Surface colourant, anticaking agent, stabilizer
63.	170(i)	Calcium carbonate	anticaking agent
64.	170(ii)	Calcium hydrogen carbonate	anticaking agent
65.	171	Titanium dioxide	Colour
66.	172	Iron oxides	Colour
67.	172(i)	Iron oxide, black	Colour
68.	172(ii)	Iron oxide, red	Colour
69.	172(iii)	Iron oxide, yellow	Colour
70.	173	Aluminium	Colour
71.	174	Silver	Colour
72.	175	Gold	Colour
73.	180	Lithol rubine BK	Colour
74.	181	Tannins, food grade	Colour, emulsifier, stabilizer, thickener
75.	182	Orchil	Colour
76.	200	Sorbic acid	Preservative
77.	201	Sodium sorbate	Preservative
78.	202	Potassium sorbate	Preservative
79.	203	Calcium sorbate	Preservative
80.	209	Heptyl p-hydroxybenzoate	Preservative
81.	210	Benzoic acid	Preservative
82.	211	Sodium benzoate	Preservative
83.	212	Potassium benzoate	Preservative
84.	213	Calcium benzoate	Preservative

85.	214	Ethyl p-hydroxybenzoate	Preservative
86.	215	Sodium ethyl p-hydroxybenzoate	Preservative
87.	216	Propyl p-hydroxybenzoate	Preservative
88.	217	Sodium propyl p-hydroxybenzoate	Preservative
89.	218	Methyl p-hydroxybenzoate	Preservative
90.	219	Sodium methyl p-hydroxybenzoate	Preservative
91.	220	Sulphur dioxide	Preservative, antioxidant
92.	221	Sodium sulphite	Preservative, antioxidant
93.	222	Sodium hydrogen sulphite	Preservative, antioxidant
94.	223	Sodium metabisulphite	Preservative, bleaching agent, antioxidant
95.	224	Potassium metabisulphite	Preservative, antioxidant
96.	225	Potassium sulphite	Preservative, antioxidant
97.	226	Calcium sulphite	Preservative, antioxidant
98.	227	Calcium hydrogen sulphite	Preservative, antioxidant
99.	228	Potassium bisulphate	Preservative, antioxidant
100.	230	Diphenyl	Preservative
101.	231	Ortho-phenylphenol	Preservative
102.	232	Sodium o-phenylphenol	Preservative
103.	233	Thiabendazole	Preservative
104.	234	Nisin	Preservative
105.	235	Pimaricin (natamycin)	Preservative
106.	236	Formic acid	Preservative
107.	237	Sodium formate	Preservative
108.	238	Calcium formate	Preservative
109.	239	Hexamethylene tetramine	Preservative
110.	240	Formaldehyde	Preservative

111.	241	Gum guaicum	Preservative
112.	242	Dimethyl dicarbonate	Preservative
113.	249	Potassium nitrite	Preservative, colour fixative
114.	250	Sodium nitrite	Preservative, colour fixative
115.	251	Sodium nitrate	Preservative, colour fixative
116.	252	Potassium nitrate	Preservative, colour fixative
117.	260	Acetic acid, glacial	Preservative, acidity regulator
118.	261	Potassium acetates	Preservative, acidity regulator
119.	261(i)	Potassium acetate	Preservative, acidity regulator
120.	261(ii)	Potassium diacetate	Preservative, acidity regulator
121.	262	Sodium acetates	Preservative, acidity regulator, Sequestrant
122.	262(i)	Sodium acetate	Preservative, acidity regulator, Sequestrant
123.	262(ii)	Sodium diacetate	Preservative, acidity regulator, Sequestrant
124.	263	Calcium acetate	Preservative, stabilizer, acidity Regulator
125.	264	Ammonium acetate	Acidity regulator
126.	265	Dehydroacetic acid	Preservative
127.	266	Sodium dehydroacetate	Preservative
128.	270	Lactic acid (L-, D—and Dl-)	Acidity regulator
129.	280	Propionic acid	Preservative
130.	281	Sodium propionate	Preservative
131.	282	Calcium propionate	Preservative
132.	283	Potassium propionate	Preservative
133.	290	Carbon dioxide	Carbonating agent, Packing agent
134.	296	Malic acid (DL-L-)	Acidity regulator, flavouring agent.

135.	297	Fumaric acid	acidity regulator
136.	300	Ascorbic acid (L)	Antioxidant
137.	301	Sodium ascorbate	Antioxidant
138.	302	Calcium ascorbate	Antioxidant
139.	303	Potassium ascorbate	Antioxidant
140.	304	Ascorbyl palmitate	Antioxidant
141.	305	Ascorbyl stearate	Antioxidant
142.	306	Mixed tocopherols	Antioxidant
143.	307	Alpha-tocopherol	Antioxidant
144.	308	Synthetic gamma-tocopherol	Antioxidant
145.	309	Synthetic delta-tocopherol	Antioxidant
146.	310	Propyl gallate	Antioxidant
147.	311	Octyl gallate	Antioxidant
148.	312	Dodecyl gallate	Antioxidant
149.	313	Ethyl gallate	Antioxidant
150.	314	Guaiac resin	Antioxidant
151.	315	Isoascorbic acid	Antioxidant
152.	316	Sodium isoascorbate	Antioxidant
153.	317	Potassium isoascorbate	Antioxidant
154.	318	Calcium isoascrobate	Antioxidant
155.	319	Tertiary butylhydroquinone	Antioxidant
156.	320	Butylated hydroxyanisole	Antioxidant
157.	321	Butylated hydroxytoluene	Antioxidant
158.	322	Lecithins	Antioxidant, emulsifier
159.	323	Anoxomer	Antioxidant
160.	324	Ethoxyquin	Antioxidant

161.	325	Sodium lactate	antioxidant, synergist, humectant, bulking agent
162.	326	Potassium lactate	antioxidant, synergist, acidity Regulator
163.	327	Calcium lactate	acidity regulator, flour treatment agent
164.	328	Ammonium lactate	acidity regulator, flour treatment agent
165.	329	Magnesium lactate (D-,L-)	acidity regulator, flour treatment agent
166.	330	Citric acid	acidity regulator, synergist for Sequestrant
167.	331	Sodium citrates	acidity regulator, sequestrant emulsifier stabilizer
168.	331(i)	Sodium dihydrogen citrate	acidity regulator, sequestrant emulsifer, stabilizer
169.	331(ii)	Disodium monohydrogen citrate	acidity regulator, stabilizer, sequestrant, emulsifier
170.	331(iii)	Trisodium citrate	acidity regulator, sequestrant, emulsifier, Stabilizer
171.	332	Potassium citrates	acidity regulator, sequestrant, Stabilizer
172.	332(i)	Potassium dihydrogen citrate	acidity regulator, sequestrant, Stabilizer
173.	332(ii)	Tripotassium citrate	acidity regulator, sequestrant, Stabilizer
174.	333	calcium citrates	acidity regulator, firming agent, Sequestrant
175.	334	Tartaric acid [L(+)-]	acidity regulator, sequestrant, antioxidant synergist
176.	335	Sodium tartrates	Stabilizer, sequestrant,
177.	335(i)	Monosodium tartrate	Stabilizer, sequestrant
178.	335(ii)	Disodium tartrate	Stabilizer, sequestrant
179.	336	Potassium tartrate	Stabilizer, sequestrant
180.	336(i)	Monopotassium tartrate	Stabilizer, sequestrant
181.	336(ii)	Dipotassium tartrate	Stabilizer, sequestrant

182.	337	Potassium sodium tartrate	Stabilizer, sequestrant
183.	338	Orthophosphoric acid	acidity regulator, antioxidant Synergist
184.	339	Sodium phosphates	acidity regulator, texturizer, sequestrant, stabilizer Emulsifier, water retention agent
185.	339(i)	Monosodium orthophosphate	Acidity regulator, texturizer, Sequestrant, stabilizer, Emulsifier, water retention agent
186.	339(ii)	Disodium orthophosphate	acidity regulator, texturizer, sequestrant, stabilizer Emulsifier, water retention agent
187.	339(iii)	Trisodium orthophosphate	sequestrant, stabilizer, Emulsifier, water retention agent, acidity regulator, Texturizer
188.	340	Potassium Phosphates	acidity regulator, texturizer, sequestrant, stabilizer, Emulsifier, water retention Agent
189.	340(i)	Monopotassium orthophosphate	acidity regulator, texturizer, sequestrant, stabilizer Emulsifier, water retention Agent
190.	340(ii)	Dipotassium orthophosphate	acidity regulator, texturizer, sequestrant, stabilizer, Emulsifier, water retention Agent
191.	340(iii)	Tripotassium orthophosphate	acidity regulator, texturizer, sequestrant, stabilizer, Emulsifier, water retention Agent
192.	341	Calcium phosphates	acidity regulator, texturizer, water retention agent, flour treatment agent, raising agent, firming agent, anticaking agent
193.	341(i)	Monocalcium orthophosphate	acidity regulator, texturizer, water retention agent, flour treatment agent, firming agent, anticaking agent

194.	341(ii)	Dicalcium orthophosphate	acidity regulator, texturizer, flour treatment agent, raising agent, firming agent, anticaking Agent
195.	341(iii)	Tricalcium orthophosphate	acidity regulator, texturizer, water retention agent, flour treatment agent, firming agent, anticaking agent
196.	342	Ammonium phosphates	acidity regulator, flour treatment agent
197.	342(i)	Monoamonium orthophosphate	acidity regulator, flour treatment agent
198.	342(ii)	Diammonium orthophosphate	acidity regulator, flour treatment agent
199.	343	Magnesium phosphates	acidity regulator, anticaking Agent
200.	343(i)	Monomagnesium orthophosphate	acidity regulator, anticaking Agent
201.	343(ii)	Dimagnesium orthophosphate	acidity regluator, anticaking Agent
202.	343(iii)	Trimagnesium orthophosphate	acidity regulator, anticaking Agent
203.	344	Lecithin citrate	Preservative
204.	345	Magnesium citrate	acidity regulator
205.	349	Ammonium malate	acidity regulator
206.	350	Sodium malates	acidity regulator, humectant
207.	350(i)	Sodium hydrogen malate	acidity regulator, humectant
208.	350(ii)	Sodium malate	acidity regulator, humectant
209.	351	Potassium malates.	acidity regulator

210.	351(i)	Potassium hydrogen malate	acidity regulator
211.	351(ii)	Potassium malate	acidity regulator
212.	352	Calcium malates	acidity regulator
213.	352(i)	Calcium hydrogen malate	acidity regulator
214.	352(ii)	Calcium malate	acidity regulator
215.	353	Metatartaric acid	acidity regulator
216.	354	Calcium tartrate	acidity regulator
217.	355	Adipic acid	acidity regulator
218.	356	Sodium adipates	acidity regulator
219.	357	Potassium adipates	acidity regulator
220.	359	Ammonium adipates	acidity regulator
221.	363	Succinic acid	acidity regulator
222.	364(i)	Monosodium succinate	acidity regulator, flavour Enhancer
223.	364(ii)	Disodium succinate	acidity regulator, flavour Enhancer
224.	365	Sodium fumarates	acidity regulator
225.	366	Potassium fumarates	acidity regulator
226.	367	Calcium fumarates	acidity regulator
227.	368	Ammonium fumarates	acidity regulator
228.	370	1, 4-Heptonolactone	acidity regulator, sequestrant
229.	375	Nicotinic acid	Colour retention agent
230.	380	Ammonium citrates	acidity regulator
231.	381	Ferric ammonium citrate	anticaking agent
232.	383	Calcium glycerophosphate	Thickener, gelling agent, Stabilizer

233.	384	Isopropyl citrates	Antioxidant, Preservative, Sequestrant
234.	385	Calcium disodium ethylene-diamine-tetra-acetate	Antioxidant, Preservative, Sequestrant
235.	386	Disodium ethylene-diamine-tetra-acetate	Antioxidant, Preservative, Sequestrant
236.	387	Oxy stearin	Antioxidant, sequestrant
237.	388	Thiodipropionic acid	Antioxidant
238.	389	Dilauryl thiodipropionate	Antioxidant
239.	390	Distearyl thiodipropionate	Antioxidant
240.	391	Phytic acid	Antioxidant
241.	399	Calcium lactobionate	Stabilizer
242.	400	Alginic acid	Thickener, stabilizer
243.	401	Sodium alginate	Thickener, stabilizer, gelling Agent
244.	402	Potassium alginate	Thickener, stabilizer
245.	403	Ammonium alginate	Thickener, stabilizer
246.	404	Calcium alginate	Thickener, stabilizer, gelling Agent, antifoaming agent
247.	405	Propylene glycol alginate	Thickener, emulsifier
248.	406	Agar	Thickener, gelling agent, Stabilizer
249.	407	Carrageenan and its Na, K, NH4 salts (includes furcellaran)	Thickener, gelling agent, Stabilizer
250.	407a	Processed Euchema Seaweed (PES)	Thickener, stabilizer
251.	408	Bakers yeast glycan	Thickener, gelling agent, Stabilizer

252.	409	Arabinogalactan	Thickener, gelling agent, Stabilizer
253.	410	Carob bean gum	Thickener, Stabilizer
254.	411	Oat gum	Thickener, Stabilizer
255.	412	Guar gum	Thickener, Stabilizer, Emulsifier
256.	413	Tragacanth gum	Thickener, Stabilizer, Emulsifier
257.	414	Gum arabic (acacia gum)	Thickener, Stabilizer
258.	415	Xanthan gum	Thickener, Stabilizer, emulsifier, foaming agent
259.	416	Karaya gum	Thickener, Stabilizer
260.	417	Tara gum	Thickener, Stabilizer
261.	418	Gellan gum	Thickener, Stabilizer, gelling Agent
262.	419	Gum ghatti	Thickener, Stabilizer, Emulsifier
263.	420	Sorbitol and sorbitol syrup	Sweetener, Humectant, sequestrant, Texturizer, Emulsifier
264.	421	Mannitol	Sweetener, anticaking agent
265.	422	Glycerol	Humectant, bodying agent
266.	424	Curd lan	Thickener, Stabilizer
267.	425	Konjac flour	Thickener
268.	429	Peptones	Emulsifier
269.	430	Polyoxyethylene (8) stearate	Emulsifier

270.	431	Polyoxyethylene (40) stearate	Emulsifier
271.	432	Polyoxyethylene (20) sorbitan Monolaurate	Emulsifier, dispersing agent
272.	433	Polyoxyethylene (20) sorbitan Monoleate	Emulsifier, dispersing agent
273.	434	Polyoxyethylene (20) sorbitan Monopalmitate	Emulsifier, dispersing agent
274.	435	Polyoxyethylene (20) sorbitan Monostearate	Emulsifier, dispersing agent
275.	436	Polyoxyethylene (20) sorbitan Tristearate	Emulsifier, dispersing agent
276.	440	Pectins	Thickener, emulsifier, Stabilizer, gelling agent
277.	441	Superglycerinated hydrogenated rapeseed oil	Emulsifier
278.	442	Ammonium salts of phosphatidic Acid	Emulsifier
279.	443	Brominated vegetable oil	Emulsifier, stabilizer
280.	444	Sucrose acetate isobutyrate	Emulsifier, stabilizer
281.	445	Glycerol esters of wood resin	Emulsifier, stabilizer
282.	446	Succistearin	Emulsifier
283.	450	Diphosphates	acidity regulator, texturizer, sequestrant, stabilizer, Emulsifier, water retention Agent
284.	450(i)	Disodium diphosphate	acidity regulator, texturizer,

			sequestrant, stabilizer, Emulsifier, water retention Agent
285.	450(ii)	Trisodium diphosphate	acidity regulator, texturizer, sequestrant, stabilizer, Emulsifier, water retention Agent
286.	450(iii)	Tetrasodium diphosphate	acidity regulator, texturizer, sequestrant, stabilizer, Emulsifier, water retention Agent
287.	450(iv)	Dipotassium diphosphate	acidity regulator, texturizer, sequestrant, stabilizer, Emulsifier, water retention Agent
288.	450(v)	Tetrapotassium diphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent Sequestrant, water retention Agent
289.	450(vi)	Dicalcium diphosphate	acidity regulator, texturizer, sequestrant stabilizer, Emulsifier, water retention Agent
290.	450(vii)	Calcium dihydrogen diphosphate	Emulsifier, raising agent, stabilizer, sequestrant, acidity, regulator, water retention agent
291.	450 (viii)	Dimagnesium diphosphate	acidity regulator, texturizer,

			sequestrant, stabilizer, Emulsifier, water retention Agent
292.	451	Triphosphates	Sequestrant, acidity regulator Texturizer
293.	451(i)	Pentasodium	Sequestrant, acidity regulator, Texturizer
294.	451(ii)	Pentapotassium triphosphate	Sequestrant, acidity regulator, Texturizer
295.	452	Polyphosphates	acidity regulator, texturizer, sequestrant stabilizer, Emulsifier, water retention Agent
296.	452(i)	Sodium polyphosphate	acidity regulator, texturizer, sequestrant stabilizer, Emulsifier, water retention Agent
297.	452(ii)	Potassium Polyphosphate	acidity regulator, texturizer, sequestrant stabilizer, Emulsifier, water retention Agent
298.	452(iii)	Sodium calcium polyphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
299.	452(iv)	Calcium polyphosphates	Emulsifier, Stabilizer, acidity

			regulator, raising agent, Sequestrant, water retention Agent
300.	452(v)	Ammonium polyphosphates	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
301.	458	Gamma Cyclodextrin	Stabilizer, binder
302.	459	Beta-cyclodextrin	Stabilizer, binder
303.	460	Cellulose	Emulsifier, dispersing agent, anticaking agent, texturizer
304.	460(i)	Microcystalline cellulose	Emulsifier, dispersing agent, anticaking agent
305.	460(ii)	Powdered cellulose	Emulsifier dispersing agent, anticaking agent
306.	461	Methyl cellulose	Thickener, Emulsifier, Stabilizer
307.	462	Ethyl cellulose	Binder, filler
308.	463	Hydroxypropyl cellulose	Thickener, Emulsifier, Stabilizer
309.	464	Hydroxypropyl methyl cellulose	Thickener, Emulsifier, Stabilizer
310.	465	Methyl ethyl cellulose	Thickener antifoaming agent, Emulsifier, stabilizer
311.	466	Sodium carboxymethyl cellulose	Thickener, Emulsifier, Stabilizer

312.	467	Ethyl hydroxyethyl cellulose	Thickener, Emulsifier, Stabilizer
313.	468	Croscaramellose	Stabilizer, binder
314.	469	Sodium carboxymethyl cellulose, enzymatically hydrolysed	Thickener, stabilizer
315.	470	Salts of fatty acids (with base Al, Ca, Na, Mg, K, and NH4)	Emulsifier, Stabilizer, anticaking agent
316.	471	Mono-and di-glycerides of fatty acids	Emulsifier, Stabilizer
317.	472a	Acetic and fatty acid esters of glycerol	Emulsifier, Stabilizer Sequestrant
318.	472b	Lactic and fatty acid esters of glycerol	Emulsifier, Stabilizer, Sequestrant
319.	472c	Citric and fatty acid esters of glycerol	Emulsifier, Stabilizer, Sequestrant
320.	472d	Tartaric acid esters of mono and diglycerides of fatty acids	Emulsifier, Stabilizer, Sequestrant
321.	472e	Diacetyltartric and fatty acid ester of glycerol	Emulsifier, Stabilizer, Sequestrant
322.	472f	Mixed tartaric, acetic and fatty acid esters of glycerol	Emulsifier, Stabilizers, Sequestrant
323.	472g	Succinylated monoglycerides	Emulsifier, Stabilizer, Sequestrant
324.	473	Sucrose esters of fatty acids	Emulsifier, Stabilizer, Sequestrant
325.	474	Sucroglycerides	Emulsifier, Stabilizer,

			Sequestrant
326.	475	Polyglycerol esters of fatty acid	Emulsifier, Stabilizer, Sequestrant
327.	476	Polyglycerol esters of interesteri-fied ricinoleic acid	Emulsifier, Stabilizer, Sequestrant
328.	477	Propylene glycol esters of fatty Acids	Emulsifier, Stabilizer, Sequestrant
329.	478	Lactylated fatty acid esters of glycerol and propylene glycol	Emulsifier, Stabilizer, Sequestrant
330.	479.	Thermally oxidized soya bean oil with mono-and di-glycerides of fatty acids	Emulsifier, Stabilizer, Sequestrant
331.	480	Dioctyl sodium sulphosuccinate	Emulsifier, wetting agent
332.	481	Sodium lactylate	Emulsifier, Stabilizer
333.	481(i)	Sodium stearoyl lactylates	Emulsifier, Stabilizer
334.	481(ii)	Sodium oleyl lactylate	Emulsifier, Stabilizer
335.	482	Calcium lactylates	Emulsifier, Stabilizer
336.	482(i)	Calcium stearoyl lactylate	Emulsifier, Stabilizer
337.	482(ii)	Calcium oleyl lactylates	Emulsifier, Stabilizer
338.	483	Stearyl tartrate	Flour treatment agent
339.	484	Stearyl citrate	Emulsifier, sequestrant
340.	485	Sodium stearoyl fumarate	Emulsifier
341.	486	Calcium stearoyl fumarate	Emulsifier
342.	487	Sodium laurylsulphate	Emulsifier
343.	488	Ethoxylated mono-and di-glycerides	Emulsifier
344.	489	Methyl glucoside-coconut oil ester	Emulsifier

345.	491	Sorbitan monostearate	Emulsifier
346.	492	Sorbitan tristearate	Emulsifier
347.	493	Sorbitan monolaurate	Emulsifier
348.	494	Sorbitan monooleate	Emulsifier
349.	495	Sorbitan monopalmitate	Emulsifier
350.	496	Sorbitan trioleate	Stabilizer, Emulsifier
351.	500	Sodium carbonates	acidity regulator, raising agent, anticaking agent
352.	500(i)	Sodium carbonate	acidity regluator, raising agent, anticaking agent
353.	500(ii)	Sodium hydrogen carbonate	acidity regulator, raising agent, anticaking agent
354.	500(iii)	Sodium sesquicarbonate	acidity regulator, raising agent, anticaking agent
355.	501	Potassium carbonates	acidity regulator, stabilizer
356.	501(i)	Potassium carbonate	acidity regulator, stabilizer
357.	501(ii)	Potassium hydrogen carbonate	acidity regulator, stabilizer
358.	503	Ammonium carbonates	acidity regulator, raising agent
359.	503(i)	Ammonium carbonate	acidity regulator, raising agent
360.	503(ii)	Ammonium hydrogen carbonate	acidity regulator, raising agent
361.	504	Magnesium carbonates	acidity regulator, anticaking agent, colour retention agent
362.	504(i)	Magnesium carbonate	acidity regulator, anticaking agent, colour retention agent
363.	504(ii)	Magnesium hydrogen carbonate	acidity regulator, anticaking agent, colour retention agent

364.	505	Ferrous carbonate	acidity regulator
365.	507	Hydrochloric acid	acidity regulator acid
366.	508	Potassium chloride	gelling agent
367.	509	Calcium chloride	firming agent
368.	510	Ammonium chloride	flour treatment agent
369.	511	Magnesium chloride	firming agent
370.	512	Stannous chloride	Antioxidant, colour retention Agent
371.	513	Sulphuric acid	acidity regulator
372.	514	Sodium sulphates	acidity regulator
373	515	Potassium sulphates	Acidity regulator
374.	516	Calcium Sulphate	Dough conditioner, Sequestrant, firming agent
375.	517	Ammonium sulphate	Flour treatment agent, stabilizer
376.	518	Magnesium sulphate	firming agent
377.	519	Cupric sulphate	colour fixative, preservative
378.	520	Aluminium sulphate	firming agent
379.	521	Aluminium sodium Sulphate	firming agent
380.	522	Aluminium potassium Sulphate	Acidity regulator, stabilizer
381.	523	Aluminium ammonium Sulphate	Stabilizer, firming agent
382.	524	Sodium hydroxide	acidity regulator
383.	525	Potassium hydroxide	acidity regulator
384.	526	Calcium hydroxide	acidity regulator, firming agent
385.	527	Ammonium hydroxide	acidity regulator
386.	528	Magnesium hydroxide	acidity regulator, colour retention agent

387.	529	Calcium oxide	acidity regulator, colour retention agent
388.	530	Magnesium oxide	anticaking agent
389.	535	Sodium ferrocyanide	anticaking agent
390.	536	Potassium ferrocyanide	anticaking agent
391.	537	Ferrous hexacyanomanganate	anticaking agent
392.	538	Calcium ferrocyanide	anticaking agent
393.	539	Sodium thiosulphate	antioxidant, sequestrant
394.	541	Sodium aluminium phosphate	acidity regulator, emulsifier
395.	541(i)	Sodium aluminium phosphate-acidic	acidity regulator, emulsifier
396.	541(ii)	Sodium aluminium phosphate-basic	acidity regulator, emulsifier
397.	542	Bone phosphate (essentially calcium phosphate, tribasic)	Emulsifier, anticaking agent, water retention agent
398.	550	Sodium silicates	anticaking agent
399.	550(i)	Sodium silicate	anticaking agent
400.	550(ii)	Sodium metasilicate	anticaking agent
401.	551	Silicon dioxide, amorphous	anticaking agent
402.	552	Calcium silicate	anticaking agent
403.	553	Magnesium silicates	anticaking agent, dusting Powder
404.	553(i)	Magnesium silicate	anticaking agent, dusting Powder
405.	553(ii)	Magnesium trisilicate	anticaking agent, dusting Powder
406.	553(iii)	Talc	anticaking agent, dusting Powder

407.	554	Sodium aluminosilicate	anticaking agent
408.	555	Potassium aluminium silicate	anticaking agent
409.	556	Calcium aluminium silicate	anticaking agent
410.	557	Zinc silicate	anticaking agent
411.	558	Bentonite	anticaking agent
412.	559	Aluminium silicate	anticaking agent
413.	560	Potassium silicate	anticaking agent
414.	570	Fatty acids	foam stabilizer, glazing agent, antifoaming agent
415.	574	Gluconic acid (D-)	acidity regulator, raising agent
416.	575	Glucono delta-lactone	acidity regulator, raising agent
417.	576	Sodium gluconate	Sequestrant
418.	577	Potassium gluconate	Sequestrant
419.	578	Calcium gluconate	acidity regluator, firming agent
420.	579	Ferrous gluconate	Colour retention agent
421.	580	Magnesium gluconate	acidity regulator, firming agent
422.	585	Ferrous lactate	colour retention agent
423.	586	4-Hexylresorcinol	colour retention agent, Antioxidant
424.	620	Glutamic acid (L (+)-)	flavour enhancer
425.	621	Monosodium glutamate	flavour enhancer
426.	622	Monopotassium glutamate	flavour enhancer
427.	623	Calcium glutamate	flavour enhancer
428.	624	Monoammonium glutamate	flavour enhancer
429.	625	Magnesium glutamate	flavour enhancer
430.	626	Guanylic acid	flavour enhancer

431.	627	Disodium 5'-guanylate	flavour enhancer
432.	628	Dipotassium 5'-guanylate	flavour enhancer
433.	629	Calcium 5'-guanylate	flavour enhancer
434.	630	Inosinic acid	flavour enhancer
435.	631	Disodium 5'-inosinate	flavour enhancer
436.	632	Potassium Inosate	flavour enhancer
437.	633	Calcium 5'-inosinate	flavour enhancer
438.	634	Calcium 5'-ribonucleotides	flavour enhancer
439.	635	Disodium 5'-ribonucleotides	flavour enhancer
440.	636	Maltol	flavour enhancer
441.	637	Ethyl maltol	flavour enhancer
442.	638	Sodium L-Aspartate	flavour enhancer
443.	639	DL-Alanine	flavour enhancer
444.	640	Glycine	flavour enhancer
445.	641	L-Leucine	flavour enhancer
446.	642	Lysin hydrochloride	flavour enhancer
447.	900a	Polydimethylsiloxane	antifoaming agent, anticaking agent, emulsifier
448.	900b	Methylphenylpolysiloxane	antifoaming agent
449.	901	Beeswax, white and yellow	glazing agent, release agent
450.	902	Candeilla Wax	glazing agent
451.	903	Carnaubawax	glazing agent
452.	904	Shellac	glazing agent
453.	905a	Mineral oil, food grade	glazing agent, release agent sealing agent
454.	905b	Petrolatum Petroleumielly	glazing agent, release agent,

			sealing agent
455.	905c	Petroleum wax	glazing agent, release agent, sealing agent
456.	905c(i)	Microcrystallinewax	glazing agent
457.	905c(ii)	Paraffin wax	glazing agent
458.	906	Benzoin gum	glazing agent
459.	907	Hydrogenated poly-1 decene	glazing agent
460.	908	Rice bran wax	glazing agent
461.	909	Spermaceti wax	glazing agent
462.	910	Wax esters	glazing agent
463.	911	Methyl esters of fatty acids	glazing agent
464.	913	Lanolin	glazing agent
465.	915	Glycerol-, methyl-, or penta-erithrytol esters of colophane	glazing agent
466.	916	Calcium iodate	flour treatment agent
467.	917	Potassium iodate	flour treatment agent
468.	918	Nitrogen oxide	flour treatment agent
469.	919	Nitrosyl chloride	flour treatment agent
470.	920	L-Cysteine and its hydrochlorides-sodium and potassium salts	flour treatment agent
471.	921	L-Cysteine and its hydrochlorides-sodium and potassium salts	flour treatment agent
472.	922	Potassium persulphate	flour treatment agent
473.	923	Ammonium persulphate	flour treatment agent
474.	924a	Potassium bromate	flour treatment agent
475.	924b	Calcium bromate	flour treatment agent

476.	925	Chlorine	flour treatment agent
477.	926	Chlorine dioxide	flour treatment agent
478.	927a	Azodicarbonamide	flour treatment agent
479.	927b	Carbamide (urea)	flour treatment agent
480.	928	Benzoyl peroxide	flour treatment agent, Preservative
481.	929	Acetone peroxide	flour treatment agent
482.	930	Calcium peroxide	flour treatment agent
483.	938	Argon	packing gas
484.	939	Helium	packing gas
485.	940	Dichlorodifluoromethane	Propellant, liquid freezant
486.	941	Nitrogen	Packing gas, freezant
487.	942	Nitrous oxide	Propellant
488.	943a	Butane	Propellant
489.	943b	Isobutane	Propellant
490.	944	Propane	Propellant
491.	945	Chloropentafluoroethane	Propellant
492.	946	Octafluorocyclobutane	Propellant
493.	948	Oxygen	packing gas
494.	950	Acesulfame potassium	Sweetener, flavour enhancer
495.	951	Aspartame	Sweetener, flavour enhancer
496.	952	Cyclamic acid (and Na, K, Ca Salts)	Sweetener
497	953	Isomalt (isomaltitol)	Sweetener, anticaking agent, bulking agent, glazing agent
498.	954	Saccharin (and Na, K, Ca salts)	Sweetener
499.	955	Sucralose (trichlorogalactosucrose)	Sweetener

500.	[75][956	Alitame	Sweetener]
	[Amendment for omission of this provision w.e.f. 1st February 2022]		
501.	957	Thaumatin	Sweetener, flavour enhancer
502.	958	Glycyrrhizin	Sweetener, flavour enhancer
503.	959	Neohesperidine dihydrochalcone	Sweetener
504.	960	Stevioside	Sweetener
505.	964	Polyglycitol syrup	Sweetener
506.	965	Maltitol and matitol Syrup	Sweetener, stabilizer, emulsifier
507.	966	Lactitol	Sweetener, texturizer
508.	967	Xylitol	Sweetener, humectant, stabilizer, Emulsifier, thickener
509.	968	Erythritol	Sweetener, flavour enhancer, Humectant
510.	999	Qulillaia extracts	foaming agent
511.	1000	Cholic acid	Emulsifier
512.	1001	Choline salts and esters	Emulsifier
513.	1001(i)	Choline acentate	Emulsifier
514.	1001(ii)	Choline carbonate	Emulsifier
515.	1001(iii)	Choline chloride	Emulsifier
516.	1001(iv)	Choline citrate	Emulsifier
517.	1001(v)	Choline tartrate	Emulsifier
518.	1001(vi)	Choline lactate	Emulsifier
519.	1100	Amylases	flour treatment agent
520.	1101	Proteases	flour treatment agent, stabilizer, tenderizer, flavour enhancer
521.	1101(i)	Protease	flour treatment agent, stabilizer,

			tenderizer, flavour enhancer
522	1101(ii)	Papain	flour treatment agent, stabilizer, tenderizer, flavour enhancer
523	1101(iii)	Bromelain	flour treatment agent, stabilizer, tenderizer, flavour enhancer
524	1101(iv)	Ficin	flour treatment agent, stabilizer, tenderizer, flavour enhancer
525	1102	Glucose oxidase	Antioxidant
526	1103	Invertases	Stabilizer
527	1104	Lipases	flavour enhancer
528	1105	Lysozyme	Preservative
529	1200	Polydextroses A and N	bulking agent, stabilizer, thickener, Humectant texturizer
530	1201	Polyvinylpyrrolidone	bodying agent, stabilizer, clarifying agent, dispersing Agent
531	1202	Polyvinylpolypyrrolidone	colour stabilizer, colloidal, Stabilizer
532	1503	Castor oil	release agent
533	1505	Triethyl citrate	foam stabilizer
534	1518	Triacetin	Humectant
535	1520	Propylene glycol	Humectant, Wetting agent, dispersing agent
536	1521	Polyethylene glycol	antifoaming agent
Supplementary List-Modified Starches			
537	1400	Dextrins, roasted starch white	Stabilizer, thickener, binder

		and yellow	
538	1401	Acid-treated starch	Stabilizer, thickener, binder
539	1402	Alkaline treated starch	Stabilizer, thickener, binder
540	1403	Bleached starch	Stabilizer, thickener, binder
541	1404	Oxidised starch	Stabilizer, thickener, binder
542	1405	Starches, enzyme-treated	Thickener
543	1410	Monostarch phosphate	Stabilizer, thickener, binder
544	1411	Distarch glycerol	Stabilizer, thickener, binder
545	1412	Distarch phosphate esterified with sodium trimetaphosphate;	Stabilizer, thickener, binder
546	1413	Phosphated distarch phosphate	Stabilizer, thickener, binder
547	1414	Acetylated distarch phosphate	Emulsifier, thickener, binder
548	1420	Starch acetate esterified with Acetic anhydride	Stabilizer, thickener
549	1421	Starch acetate esterified with vinyl acetate	Stabilizer, thickener
550	1422	Acetylated distarch adipate	Stabilizer, thickener, binder, Emulsifier
551	1423	Acetylated distarch glycord	Stabilizer, thickener
552	1440	Hydroxypropyl starch	Stabilizer, thickener, binder, Emulsifier
553	1442	Hydroxypropyl distarch phosphate	Stabilizer, thickener
554	1443	Hydroxypropyl distarch	Stabilizer, thickener
555	1450	Starch sodium octenyl succinate	Stabilizer, thickener, binder

B.List sorted in alphabetical Order-

Sl. No.	INS Number	Food Additive Name	Technical functions
1.	370	1,4-Heptonolactone	acidity regulator, sequestrant
2.	586	4-Hexylresorcinol	colour retention agent, Antioxidant
3.	950	Acesulfame potassium	Sweetener, flavour enhancer
4.	260	Acetic acid, glacial	Preservative, acidity regulator
5.	472a	Acetic and fatty acid esters of Glycerol	Emulsifier, Stabilizer, Sequestrant
6.	929	Acetone peroxide	flour treatment agent
7.	355	Adipic acid	Acidity regulator
8.	406	Agar	Thickener, gelling agent, Stabilizer
9.	400	Alginic acid	Thickener, stabilizer
10.	[75][956	Alitame	Sweetener]
	[Amendment for omission of this provision w.e.f. 1st February 2022]		
11.	103	Alkanet	Colour
12.	129	Allurared AC	Colour
13.	307	Alpha-tocopherol	Antioxidant
14.	173	Aluminium	Colour
15.	523	Aluminium ammonium sulphate	Stabilizer, firming agent
16.	522	Aluminium potassium sulphate	acidity regulator, stabilizer
17.	559	Aluminium sodium silicate	anticaking agent
18.	521	Aluminium sodium sulphate	firming agent
19.	520	Aluminium sulphate	firming agent
20.	123	Amaranth	Colour

21.	264	Ammonium acetate	Acidity regulator
22.	359	Ammonium adipates	Acidity regulator
23.	403	Ammonium alginate	Thickener, stabilizer
24.	503(i)	Ammonium carbonate	acidity regulator, raising agent
25.	503	Ammonium carbonates	acidity regulator, raising agent
26.	510	Ammonium chloride	flour treatment agent
27.	380	Ammonium citrates	Acidity regulator
28.	368	Ammonium fumarate	Acidity regulator
29.	503(ii)	Ammonium hydrogen carbonate	acidity regulator, raising agent
30.	527	Ammonium hydroxide	Acidity regulator
31.	328	Ammonium lactate	acidity regulator, flour treatment agent
32.	349	Ammonium malate	Acidity regulator
33.	923	Ammonium persulphate	flour treatment agent
34.	342	Ammonium phosphates	acidity regulator, flour treatment agent
35.	452(v)	Ammonium polyphosphates	emulsifier raising agent, stabilizer sequestrant, Acidity regulator, water retention agent
36.	442	Ammonium salts of phosphatidic Acid	Emulsifier
37.	517	Ammonium sulphate	flour treatment agent, stabilizer
38.	1100	Amylases	flour treatment agent
39.	160b	Annatto extracts	Colour
40.	323	Anoxomer	Antioxidant
41.	163(i)	Anthocyanins	Colour

42.	163	Anothocyanins	Colour
43.	409	Arabinogalactan	Thickener, gelling agent, Stabilizer
44.	938	Argon	packing gas
45.	300	Ascorbic acid(L-)	Antioxidant
46.	304	Ascorbyl palmitate	Antioxidant
47.	305	Ascorbyl stearate	Antioxidant
48.	951	Aspartame	Sweetener, flavour enhancer
49.	927a	Azodicarbonamide	flour treatment agent
50.	122	Azorubine	Colour
51.	408	Bakers yeast glycan	Thickener, gelling agent, Stabilizer
52.	901	Beeswax, white and yellow	glazing agent, release agent
53.	162	Beet red	Colour
54.	558	Bentonite	anticaking agent
55.	210	Benzole acid	Preservative
56.	906	Benzoin gum	glazing agent
57.	928	Benzoyl peroxide	flour treatment agent, Preservative
58.	160 f	Beta-apo-8’carotenic acid, methyl or enthyl ester	Colour
59.	160e	Beta-apo-Carotenal	Colour
60.	160a(i)	Beta-Carotene (Synthetic)	Colour
61.	459	Beta-cyclodextrin	Stabilizer, binder
62.	163(iii)	Blackcurrant extract	Colour
63.	542	Bone phosphate (essentially calcium	Emulsifier, anticaking agent,

		phosphate, tribasic)	water retention agent
64.	151	Brilliant black PN	Colour
65.	133	Brilliant blue FCF	Colour
66.	1101(iii)	Bromelain	flour treatment agent, stabilizer, tenderizer, flavour enhancer
67.	443	Brominated vegetable oil	Emulsifier, stabilizer
68.	154	Brown FK	Colour
69.	155	Brown HT	Colour
70.	943a	Butane	Propellant
71.	320	Butylated hydroxyanisole	Antioxidant
72.	321	Butylated hydroxytoluene	Antioxidant
73.	629	Calcium 5'-guanylate	flavour enhancer
74.	633	Calcium 5' -inosinate	flavour enhancer
75.	634	Calcium 5' -ribonucleotides	flavour enhancer
76.	263	Calcium acetate	Preservative, stabilizer, acidity Regulator
77.	404	Calcium alginate	Thickener, Stabilizer, gelling agent, antifoaming agent
78.	556	Calcium aluminium silicate	anticaking agent
79.	302	Calcium ascorbate	Antioxidant
80.	213	Calcium benzoate	Preservative
81.	924 b	Calcium bromate	flour treatment agent
82.	170(i)	Calcium carbonate	anticaking agent
83.	170	Calcium carbonate	Surface colourant, anticaking agent, stabilizer
84.	509	Calcium chloride	firming agent

85.	333	Calcium citrates	acidity regulator, firming agent, Sequestrant
86.	450 (vii)	Calcium dihydrogen diphosphate	emulsifier, raising agent, stabilizer sequestrant, acidity regulator water retention agent
87.	385	Calcium disodium ethylene-diamine-tetra-acetate	Antioxidant, Preservative, Sequestrant
88.	538	Calcium ferrocyanide	anticaking agent
89.	238	Calcium formate	Preservative
90.	367	Calcium fumarates	Acidity regulator
91.	578	Calcium gluconate	acidity regulator, firming agent
92.	623	Calcium glutamate	flavour enhancer
93.	383	Calcium	Thickener, gelling agent, Stabilizer
94.	170 (ii)	Calcium hydrogen carbonate	anticaking agent
95.	352 (i)	Calcium hydrogen malate	Acidity regulator
96.	227	Calcium hydrogen	Preservative, antioxidant
97.	526	Calcium hydroxide	acidity regulator, firming agent
98.	916	Calcium iodate	flour treatment agent
99.	318	Calcium isoascorbate	Antioxidant
100.	327	Calcium lactate	acidity regulator, flour treatment agent
101.	399	Calcium lactobionate	Stabilizer
102.	482	Calcium lactylates	Emulsifier, stabilizer
103.	352 (ii)	Calcium malate	Acidity regulator
104.	352	Calcium malates	Acidity regulator

105.	482 (ii)	Calcium oleyl lactylate	Emulsifier, stabilizer
106.	529	Calcium oxide	acidity regulator, colour retention agent
107.	930	Calcium peroxide	flour treatment agent
108.	341	Calcium phosphates	acidity regulator, flour treatment agent, firming agent, Texturizer, raising agent, anticaking agent, water retention agent
109.	452 (iv)	Calcium polyphosphates	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
110.	282	Calcium propionate	Preservative
111.	552	Calcium silicate	anticaking agent
112.	203	Calcium sorbate	Preservative
113.	486	Calcium stearoyl fumarate	Emulsifier
114.	482 (i)	Calcium stearoyl lactylate	Emulsifier, stabilizer
115.	516	Calcium sulphate	flour treatment agent, Sequestrant, firming agent
116.	226	Calcium sulphite	preservative, antioxidant
117.	354	Calcium tartrate	Acidity regulator
118.	902	Candelilla wax	glazing agent
119.	161 g	Canthaxanthin	Colour
120.	150a	Caramel I-plain	Colour
121.	150 b	Caramel II-caustic sulphite process	Colour

122.	150 c	Caramel III-ammonia process	Colour
123.	150 d	Caramel IV-ammonia sulphite process	Colour
124.	927 b	Carbamide (urea)	flour treatment agent
125.	152	Carbon black (hydrocarbon)	Colour
126.	290	Carbon dioxide	carbonating agent, packing gas
127.	120	Carmines	Colour
128.	903	Carnaubawax	glazing agent
129.	410	Carob bean gum	Thickener, stabilizer
130.	160a	Carotenes	Colour
131.	407	Carrageenan and its Na, K,	Thickener, gelling agent,
		NH4 salts (includes furcellaran)	Stabilizer
132.	1503	Castor oil	release agent
133.	460	Cellulose	Emulsifier, anticaking agent, texturizer, dispersing agent
134.	925	Chlorine	flour treatment agent
135.	926	Chlorine dioxide	flour treatment agent
136.	945	Chloropentafluoroethane	Propellant
137.	140	Chlorophyll Copper	Colour
138.	141(i)	Chlorophyll copper complex	Colour
139.	141(ii)	Chlorophyll copper complex sodium and potassium Salts	Colour
140.	1000	Cholic acid	Emulsifier
141.	1001(i)	Choline acetate	Emulsifier
142.	1001(ii)	Choline carbonate	Emulsifier
143.	1001(iii)	Choline chloride	Emulsifier

144.	1001(iv)	Choline citrate	Emulsifier
145.	1001(vi)	Choline lactate	Emulsifier
146.	1001	Choline salt and esters	Emulsifier
147.	1001(v)	Choline tartrate	Emulsifier
148.	330	Citric acid	acidity regulator, Antioxidant, Sequestrant
149.	472 c	Citric and fatty acid esters of glycerol	Emlsifier, Stabilizer, Sequestrant
150.	121	Citrus red 2	Colour
151.	141	Copper chlorophylls	Colour
152.	468	Croscaramellose	Stabilizer, binder
153.	519	Cupric sulphate	colour fixture, preservative
154.	100(i)	Curcumin	Colour
155.	100	Curcumins	Colour
156.	424	Curdlan	Thickener, stabilizer
157.	952	Cyclamic acid (and Na, K, Ca Salts)	Sweetener
158.	265	Dehydroacetic acid	Preservative
159.	472e	Diacetyltartaric and fatty acid esters of glycerol	Emulsifier, Stabilizer, Sequestrant
160.	342(ii)	Diammonium orthophosphate	acidity regulator, flour treatment agent
161.	450 (vi)	Dicalcium diphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
162.	341(ii)	Dicalcium orthophosphate	acidity regulator, flour

			treatment agent, firming agent, Texturizer
163.	940	Dichlorodifluoromethane	Propellant, liquid freezant
164.	389	Dilauryl thiodipropionate	Antioxidant
165.	450 (viii)	Dimagnesium diphosphate	emulsifier raising agent, stabilizer sequestrant, acidity regulator, water retention agent
166.	343(ii)	Dimagnesium	acidity regulator, anticaking Agent
167.	242	Dimethyl dicarbonate	Preservative
168.	480	Dioctyl sodium sulphosuccinate	Emulsifier, wetting agent
169.	230	Diphenyl	Preservative
170.	450	Diphosphates	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
171.	628	Dipotassium 5'-guanylate	flavour enhancer
172.	450(iv)	Dipotassium diphosphate	Emulsifier, Stabilizer, acidity, regulator, raising agent, Sequestrant, water retention Agent
173.	340(ii)	Dipotassium orthophosphate	acidity regulator texturizer, sequestrant, stabilizer, emulsifier water retention agent
174.	336(ii)	Dipotassium tartrate	Stabilizer, sequestrant
175.	627	Disodium 5'-guanylate	flavour enhancer

176.	631	Disodium 5'-inosinate	flavour enhancer
177.	635	Disodium 5'-ribonucleotides	flavour enhancer
178.	450(i)	Disodium diphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
179.	386	Disodium ethylene-diamine-tetra -acetate	Antioxidant, Preservative, Sequestrant
180.	331(ii)	Disodium monohydrogen citrate	acidity regulator, stabilizer, Sequestrant, emulsifier
181.	339(ii)	Disodium orthophosphate	acidity regulator, Sequestrant, emulsifier, Texturizer, Stabilizer, water retention agent
182.	335(ii)	Disodium tartrate	Stabilizer, sequestrant
183.	364(ii)	Disodium succinate	acidity regulator, flavour Enhancer
184.	390	Distearyl thiodipropionate	Antioxidant
185.	639	DL-Alanine	flavour enhancer
186.	312	Dodecyl gallate	Antioxidant
187.	968	Erythritol	Sweetener, flavour enhancer, Humectant
188.	127	Erythrosine	Colour
189.	488	Ethoxylated mono-and di-glycerides	Emulsifier
190.	324	Ethoxyquin	Antioxidant
191.	462	Ethyl cellulose	Binder, filler
192.	313	Ethyl gallate	Antioxidant

193.	467	Ethyl hydroxyethyl cellulose	Thickener, emulsifier, stabilizer
194.	637	Ethyl maltol	flavour enhancer
195.	214	Ethyl-p-hydroxybenzoate	Preservative
196.	143	Fast green FCF	Colour
197.	570	Fatty acids	foam stabilizer, glazing agent, antifoaming agent
198.	381	Ferric ammonium citrate	anticaking agent
199.	505	Ferrous carbonate	Acidity regulator
200.	579	Ferrous gluconate	Colour retention agent
201.	537	Ferrous hexacyanomanganate	anticaking agent
202.	585	Ferrous lactate	Colour retention agent
203.	1101(iv)	Ficin	flour treatment agent, stabilizer, tenderizer, flavour enhancer
204.	161a	Flavoxanthin	Colour
205.	240	Formaldehyde	Preservative
206.	236	Formic acid	Preservative
207.	297	Fumaric acid	Acidity regulator
208.	458	Gamma Cyclodextrin	Stabilizer, binder
209.	164	Gardenia yellow	Colour
210.	418	Gellan gum	Thickener, stabilizer, gelling Agent
211.	574	Gluconic acid (D-)	acidity regulator, raising agent
212.	575	Glucono delta-lactone	acidity regulator, raising agent
213.	1102	Glucose oxidase	Antioxidant
214.	620	Glutamic acid (L(+)-)	flavour enhancer
215.	422	Glycerol	Humectant, bodying agent

216.	445	Glycerol esters of wood resin	Emulsifier, stabilizer
217.	915	Glycerol-, methyl-, or penta-erithrytol esters of colophane	Glazing agent
218.	640	Glycine	Flavour modifier
219.	958	Glycyrrhizin	Sweetener, flavour enhancer
220.	175	Gold	Colour
221.	163 (ii)	Grape skin extract	Colour
222.	142	Green S	Colour
223.	314	Guaiac resin	Antioxidant
224.	626	Guanlic acid	flavour enhancer
225.	412	Guar gum	Thickener, stabilizer
226.	414	Gum arabic (acacia gum)	Thickener, stabilizer
227.	419	Gum ghatti	Thickener, stabilizer, emulsifier
228.	241	Gum guaicum	Preservative
229.	939	Helium	packing gas
230.	209	Heptyl-p-hydroxybenzoate	Preservative
231.	239	Hexamethylene tetramine	Preservative
232.	507	Hydrochloric acid	Acidity regulator
233.	907	Hydrogenated poly-1-decene	glazing agent
234.	463	Hydroxypropyl cellulose	Thickener, Emulsifier, Stabilizer
235.	464	Hydroxypropyl methyl cellulose	Thickener, Emulsifier, Stabilizer
236.	132	Indigotine	Colour
237.	630	Inosinic acid	flavour enhancer
238.	1103	Invertases	Stabilizer

239.	172 (i)	Iron oxide, black	Colour
240.	172(ii)	Iron oxide, red	Colour
241.	172(iii)	Iron oxide, yellow	Colour
242.	172	Iron oxides	Colour
243.	315	Isoascorbic acid	Antioxidant
244.	943b	Isobutane	Propellant
245.	953	Isomalt (isomaltitol)	Sweetener, anticaking agent, bulking agent, glazing agent
246.	384	Isopropyl citrates	Antioxidant, Preservative, Sequestrant
247.	416.	Karaya gum	Thickener, stabilizer
248.	425	Lonjac flour	Thickener
249.	161c	Kryptoxanthin	Colour
250.	920	L-Cysteine and its hydrochlorides-sodium and potassium salts	flour treatment agent
251.	921	L-Cysteine and its hydrochlorides-sodium and potassium salts	flour treatment agent
252.	641	L-Leucine	flavour modifier.
253.	270	Lactic acid (L-, D- and Dl-)	Acidity regulator
254.	472b	Lactic and fatty acid esters of glycerol	Emulsifier, stabilizer,
255.	966	Lactitol	Sweetener, texturizer
256.	478	Lactylated fatty acid esters of glycerol and propylene glycol	Emulsifier
257.	913	Lanolin	glazing agent
258.	344	Lecithin citrate	Preservative

259.	322	Lecithins	Antioxidant, emulsifier
260.	1104	Upases	flavour enhancer
261.	180	Lithol rubine BK	Colour
262.	161b	Lutein	Colour
263.	160d	Lucopene	Colour
264.	642	Lysin hydrochloride	flavour enhancer
265.	1105	Lysozyme	Preservative
266.	504(i)	Magnesium carbonate	acidity regulator, anticaking agent, colour retention agent
267.	504	Magnesium carbonates	acidity regulator, anticaking agent, colour retention agent
268.	511	Magnesium chloride	firming agent
269.	345	Magnesium citrate	Acidity regulator
270.	580	Magnesium gluconate	acidity regulator, firming agent
271.	625	Magnesium glutamate	flavour enhancer
272.	504(ii)	Magnesium hydrogen carbonate	acidity regulator, anticaking agent, colour retention agent
273.	528	Magnesium hydroxide	acidity regulator, colour retention agent
274.	329	Magnesium lactate (D-, L-)	acidity regulator, flour treatment agent
275.	530	Magnesium oxide	anticaking agent
276.	343	Magnesium phosphates	acidity regulator, anticaking Agent
277.	553(i)	Magnesium silicate	anticaking agent, dusting Powder

278.	553	Magnesium Silicates	anticaking agent, dusting Powder
279.	518	Magnesium sulphate	firming agent
280.	553(ii)	Magnesium trisilicate	anticaking agent, dusting Powder
281.	296	Malic acid (D-,L-)	acidity regulator, flavouring Agent
282.	965	Maltitol and maltitol Syrup	Sweetener, Stabilizer, Emulsifier
283.	636	Maltol	flavour enhancer
284.	130	Manascorubin	Colour
285.	421	Mannitol	Sweetener, anticaking agent
286.	353	Metatartaric acid	Acidity regulator
287.	461	Methyl cellulose	Thickener, Emulsifier, Stabilizer
288.	911	Methyl esters of fatty acids	glazing agent
289.	465	Methyl ethyl cellulose	Thickener, Emulsifier, stabilizer, antifoaming agent
290.	489	Methyl glucoside-coconut oil ester	Emulsifier
291.	218	Methyl p-hydroxybenzoate	Preservative
292.	900 b	Methylphenylpolysiloxane	antifoaming agent
293.	460(i)	Microcrystalline cellulose	Emulsifier, anticaking agent, texturizer, dispersing agent
294.	905 c (i)	Microcrystalline wax	glazing agent
295.	905a	Mineral oil, food grade	glazing agent, release agent, sealing agent

296.	472 f	Mixed tartaric, acetic and fatty acid esters of glycerol	Emulsifier, Stabilizer, Sequestrant
297.	306	Mixed tocopherols concentrate	Antioxidant
298.	471	Mono-and di-glycerides of fatty acids	Emulsifier, stabilizer
299.	624	Monoammonium glutamate	flavour enhancer
300.	342 (i)	Monoammonium orthophosphate	acidity regulator, flour treatment agent
301.	341 (i)	Monocalcium orthophosphate	acidity regulator, texturizer, flour treatment agent, raising Agent
302.	343 (i)	Monomagnesium orthophosphate	acidity regulator, anticaking Agent
303.	622	Monopotassium glutamate	flavour enhancer
304.	340 (i)	Monopotassium orthophosphate	acidity regulator texturizer, sequestrant stabilizer, emulsifier, water retention Agent
305.	336 (i)	Monopotassium tartrate	Stabilizer, sequestrant
306.	621	Monosodium glutamate	flavour enhancer
307.	339 (i)	Monosodium orthophosphate	acidity regulator texturizer, sequestrant stabilizer, emulsifier, water retention Agent
308.	364 (i)	Monosodium succinate	acidity regulator, flavour Enhancer
309.	335 (i)	Monosodium tartrate	Stabilizer, sequestrant

310.	160a (ii)	Natural extracts	Colour
311.	959	Neohesperidine dihydrochalcone	Sweetener
312.	375	Nicotinic acid	Colour retention agent
313.	234	Nisin	Preservative
314.	941	Nitrogen	packing gas, freezant
315.	918	Nitrogen oxides	flour treatment agent
316.	919	Nitrosyl chloride	flour treatment agent
317.	942	Nitrous oxide	Propellant
318.	411	Oat gum	Thickener, stabilizer
319.	946	Octafluorocyclobutane	Propellant
320.	311	Octyl gallate	Antioxidant
321.	182	Orchil	Colour
322.	231	Ortho-phenylphenol	Preservative
323.	338	Orthophosphoric acid	acidity regulator, antioxidant, Synergist
324.	948	Oxygen	packing gas
325.	387	Oxy stearin	Antioxidant, sequestrant
326.	1101(ii)	Papain	flour treatment agent, Stabilizer, tenderizer, flavour
327.	160c	Paprika oleoresins	Colour
328.	905 c (ii)	Paraffin wax	glazing agent
329.	131	Patent blue V	Colour
330.	440	Pectins	Thickener, Stabilizer, gelling Agent
331.	451 (ii)	Pentapotassium triphosphate	Sequestrant, acidity regulator, Texturizer

332.	451 (i)	Pentasodium triphosphate	Sequestrant, acidity regulator, Texturizer
333.	429	Peptones	Emulsifier
334.	905 b	Petrolatum (petroleum jelly)	glazing agent, release agent, sealing agent
335.	905 c	Petroleum wax	glazing agent, release agent, sealing agent
336.	391	Phytic acid	Antioxidant
337.	235	Pimaricin (natamycin)	Preservative
338.	1200	Polydextroses A and N	bulking agent, Stabilizer, thickener, Humectant, texturizer
339.	990a	Polydimethylsiloxane	antifoaming agent, anticaking agent, emulsifier
340.	1521	Polyethylene glycol	antifoaming agent
341.	475	Polyglycerol esters of fatty acids	Emulsifier
342.	476	Polyglycerol esters of interesterified Ricinoleic acid	Emulsifier
343.	964	Polyglycitol syrup	Sweetener
344.	432	Polyoxyethylene (20) sorbitan monolaurate	Emulsifier, dispersing agent
345.	433	Polyoxyethylene (20) sorbitan Mono-oleate	Emulsifier, dispersing agent
346.	434	Polyoxyethylene (20) sorbitan monopalmitate	Emulsifier, dispersing agent
347.	435	Polyoxyethylene (20) sorbitan monostearate	Emulsifier, dispersing agent

348.	436	Polyoxyethylene (20) sorbitan tristearate	Emulsifier, dispersing agent
349.	431	Polyoxyethylene (40) stearate	Emulsifier
350.	430	Polyoxyethylene (8) stearate	Emulsifier
351.	452	Polyphosphates	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
352.	1202	Polyvinylpolypyrrolidone	colour stabilizer, Colloidal, Stabilizer
353.	1201	Polyvinylpyrrolidone	bodying agent, Stabilizer, clarifying agent, dispersing Agent
354.	124	Ponceau 4R	Colour
355.	125	Ponceau SX	Colour
356.	261 (i)	Potassium acetate	Preservative, acidity regulator
357.	261	Potassium acetates	Preservative, acidity regulator
358.	357	Potassium adipates	Acidity regulator
359.	402	Potassium alginate	Thickener, stabilizer
360.	555	Potassium aluminium silicate	anticaking agent
361.	303	Potassium ascorbate	Antioxidant
362.	212	Potassium benzoate	Preservative
363.	228	Potassium bisulphite	Preservative, antioxidant
364.	924 a	Potassium bromate	flour treatment agent
365.	501 (i)	Potassium carbonate	acidity regulator, stabilizer
366.	501	Potassium carbonates	acidity regulator, stabilizer

367.	508	Potassium chloride	Gelling agent
368.	332	Potassium citrates	acidity regulator, Sequestrant, Stabilizer
369.	261 (ii)	Potassium diacetate	Preservative, acidity regulator
370.	332 (i)	Potassium dihydrogen citrate	acidity regulator, Sequestrant, Stabilizer
371.	536	Potassium ferrocyanide	anticaking agent
372.	366	Potassium fumarates	Acidity regulator
373.	577	Potassium gluconate	Sequestrant
374.	501 (ii)	Potassium hydrogen carbonate	acidity regulator, stabilizer
375.	351 (i)	Potassium hydrogen malate	Acidity regulator
376.	525	Potassium hydroxide	Acidity regulator
377.	632	Potassium Inosate	flavour enhancer
378.	917	Potassium iodate	flour treatment agent
379.	317	Potassium isoascorbate	Antioxidant
380.	326	Potassium lactate	Antioxidant, synergist, acidity Regulator
381.	351 (ii)	Potassium malate	Acidity regulator
382.	351	Potassium malates	Acidity regulator
383.	224	Potassium metabisulphite	Preservative, antioxidant
384.	252	Potassium nitrate	Preservative, colour fixative
385.	249	Potassium nitrite	Preservative, colour fixative
386.	922	Potassium persulphate	flour treatment agent
387.	340	Potassium phosphates	acidity regulator, Sequestrant, emulsifier, Texturizer, Stabilizer, water retention agent

388.	452 (ii)	Potassium polyphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
389.	283	Potassium propionate	Preservative
390.	560	Potassium silicate	anticaking agent
391.	337	Potassium sodium tartrate	Stabilizer, sequestrant
392.	202	Potassium sorbate	Preservative
393.	515	Potassium sulphates	Acidity regulator
394.	225	Potassium sulphite	Preservative, antioxidant
395.	336	Potassium tartrates	Stabilizer, sequestrant
396.	460 (ii)	Powdered cellulose	Emulsifier, anticaking agent, texturizer, dispersing agent
397.	407 a	Processed Euchema seaweed	Thickener, stabilizer
398.	944	Propane	Propellant
399.	280	Propionic acid	Preservative
400.	310	Propyl gallate	Antioxidant
401.	216	Propyl p-hydroxybenzoate	Preservative
402.	1520	Propylene glycol	Humectant, wetting agent, dispersing agent
403.	405	Propylene glycol alginate	Thickener, emulsifier
404.	477	Propylene glycol esters of fatty acids	Emulsifier
405.	1101 (i)	Protease	flour treatment agent, Stabilizer, tenderizer, flavour Enhancer

406.	1101	Proteases	flour treatment agent, Stabilizer, tenderizer, flavour Enhancer
407.	999	Quillaia extracts	foaming agent
408.	104	Quinoline yellow	Colour
409.	128	Red 2G	Colour
410.	161 f	Rhodoxanthin	Colour
411.	101 (i)	Riboflavin	Colour
412.	101 (ii)	Riboflavin 5' -phosphate, sodium	Colour
413.	101	Riboflavins	Colour
414.	908	Rice bran wax	glazing agent
415.	161 d	Rubixanthin	Colour
416.	954	Saccharin (and Na, K, Ca salts)	Sweetener
417.	470	Salts of fatty acids (with base Al, Ca, Na, Mg, K and NH4)	Emulsifier, Stabilizer, anti caking agent
418.	166	Sandalwood	Colour
419.	904	Shellac	glazing agent
420.	551	Silicon dioxide, amorphous	anticaking agent
421.	174	Silver	Colour
422.	262 (i)	Sodium acetate	Preservative, acidity regulator, Sequestrant
423.	262	Sodium acetates	Preservative, acidity regulator, Sequestrant
424.	356	Sodium adipates	Acidity regulator
425.	401	Sodium alginate	Thickener, Stabilizer, gelling Agent

426.	541	Sodium aluminium phosphate	acidity regulator, emulsifier
427.	541 (i)	Sodium aluminium phosphate-acidic	acidity regulator, emulsifier
428.	541 (ii)	Sodium aluminium phosphate-basic	acidity regulator, emulsifier
429.	554	Sodium alumino-silicate	anticaking agent
430.	301	Sodium ascorbate	Antioxidant
431.	211	Sodium benzoate	Preservative
432.	452 (iii)	Sodium calcium polyphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
433.	500(i)	Sodium carbonate	acidity regulator, raising agent, anticaking agent
434.	500	Sodium carbonates	acidity regulator, raising agent, anticaking agent
435.	466	Sodium carboxymethyl cellulose	Thickener, Emulsifier, Stabilizer
436.	469	Sodium carboxymethyl, cellulose, enzymatically, hydrolysed	Thickener, stabilizer
437.	331	Sodium citrates	acidity regulator, Sequestrant, emulsifier, stabilizer
438.	266	Sodium dehydroacetate	Preservative
439.	262 (ii)	Sodium diacetate	Preservative, acidity regulator, Sequestrant
440.	331 (i)	Sodium dihydrogen citrate	acidity regulator, Sequestrant, emulsifier, stabilizer

441.	215	Sodium ethyl p-hydroxybenzoate	Preservative
442.	535	Sodium ferrocyanide	anticaking agent
443.	237	Sodium formate	Preservative
444.	365	Sodium fumarates	Acidity regulator
445.	576	Sodium gluconate	Sequestrant
446.	500 (ii)	Sodium hydrogen carbonate	acidity regulator, raising agent, anticaking agent
447.	350 (i)	Sodium hydrogen malate	acidity regulator, humectant
448.	222	Sodium hydrogen sulphite	Preservative, antioxidant
449.	524	Sodium hydroxide	Acidity regulator
450.	316	Sodium isoascorbate	Antioxidant
451.	638	Sodium L-Aspartate	flavour enhancer
452.	325	Sodium lactate	antioxidant synergist, Humectant, bulking agent
453.	481	Sodium lactylates	Emulsifier, stabilizer
454.	487	Sodium laurylsulphate	Emulsifier
455.	350 (ii)	Sodium malate	acidity regulator, humectant
456.	350	Sodium malates	acidity regulator, humectant
457.	223	Sodium metabisulphite	Preservative, bleaching agent, Antioxidant
458.	550 (ii)	Sodium metasilicate	anticaking agent
459.	219	Sodium methyl p-hydroxybenzoate	Preservative
460.	251	Sodium nitrate	Preservative, colour fixative
461.	250	Sodium nitrite	Preservative, colour fixative
462.	232	Sodium o-phenylphenol	Preservative
463.	481 (ii)	Sodium oleyl lactylate	Emulsifier, stabilizer

464.	339	Sodium phosphates	acidity regulator, Sequestrant, emulsifier, Texturizer, Stabilizer, water retention agent
465.	452 (i)	Sodium polyphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
466.	281	Sodium propionate	Preservative
467.	217	Sodium propyl p-hydroxybenzoate	Preservative
468.	500 (iii)	Sodium sesquicarbonate	acidity regulator, raising agent, anticaking agent
469.	550 (i)	Sodium silicate	anticaking agent
470.	550	Sodium silicates	anticaking agent
471.	201	Sodium sorbate	Preservative
472.	485	Sodium stearoyl fumarate	Emulsifier
473.	481 (i)	Sodium stearoyl lactylate	Emulsifier, stabilizer
474.	514	Sodium sulphates	Acidity regulator
475.	221	Sodium sulphite	Preservative, antioxidant
476.	335	Sodium tartrates	Stabilizer, sequestrant
477.	539	Sodium thiosulphate	Antioxidant, sequestrant
478.	200	Sorbic acid	Preservative
479.	493	Sorbitan monolaurate	Emulsifier
480.	494	Sorbitan mono-oleate	Emulsifier
481.	495	Sorbitan monopalmitate	Emulsifier
482.	491	Sorbitan monostearate	Emulsifier
483.	496	Sorbitan trioleate	Stabilizer, emulsifier

484.	492	Sorbitan tristearate	Emulsifier
485.	420	Sorbitol and sorbitol syrup	Sweetener, Humectant, sequestrant, Texturizer, Emulsifier
486.	909	Spermacetic wax	glazing agent
487.	512	Stannous chloride	Antioxidant, colour retention agent
488.	484	Stearyl citrate	Emulsifier, sequestrant
489.	483	Stearyl tartrate	flour treatment agent
490.	960	Stevioside	Sweetener
491.	363	Succinic acid	Acidity regulator
492.	472g	Succinylated monoglycerides	Emulsifier, Stabilizer, Sequestrant
493.	446	Succi stearin	Emulsifier
494.	955	Sucralose	Sweetener
495.	474	Sucroglycerides	Emulsifier
496.	444	Sucrose acetate isobutyrate	Emulsifier, stabilizer
497.	473	Sucrose esters of fatty acids	Emulsifier
498.	220	Sulphur dioxide	Preservative, antioxidant
499.	513	Sulphuric acid	acidity regulator
500.	110	Sunset yellow FCF	colour
501.	441	Superglycerinated hydrogenated rapeseed oil	Emulsifier
502.	309	Synthetic delta-tocopherol	Antioxidant
503.	308	Synthetic gamma-tocopherol	Antioxidant
504.	553 (iii)	Talc	anticaking agent, dusting powder

505.	181	Tannins, food grade	Colour, Emulsifier, Stabilizer, thickener
506.	417	Tara gum	Thickener, stabilizer
507.	334	Tartaric acid (L(+)-)	acidity regulator, Sequestrant, antioxidant synergist
508.	472 d	Tartaric acid esters of mono and di-glycerides of fatty acids	Emulsifier, Stabilizer, sequestrant
509.	102	Tartrazine	Colour
510.	319	Tertiary butylhydroquinone	antioxidant
511.	450(v)	Tetrapotassium diphosphate	emulsifier, raising agent, stabilizer sequestrant, acidity regulator, water retention agent
512	450 (iii)	Tetrasodium diphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Seque-strant, water retention agent
513.	957	Thaumatin	Sweetener, flavour enhancer emulsifier
514.	479	Thermally oxidized soya bean oil with mono-and di-glycerides of fatty acids	Emulsifier
515.	233	Thiabendazole	Preservative
516.	388	Thiodipropionic acid	antioxidant
517.	171	Titanium dioxide	Colour
518.	413	Tragacanth gum	Thickener, Stabilizer, emulsifier
519.	1518	Triacetin	Humectant
520.	341 (iii)	Tricalcium orthophosphate	acidity regulator, texturizer, flour treatment agent, raising agent, firming agent, anticaking agent, water retention agent
521.	1505	Triethyl citrate	foam stabilizer

522.	343 (iii)	Trimagnesium orthophosphate	acidity regulator, anticaking Agent
523.	451	Tri phosphates	Sequestrant, acidity regulator, Texturizer
524.	332 (ii)	Tripotassium citrate	acidity regulator, Sequestrant, Stabilizer
525.	340 (iii)	Tripotassium orthophosphate	acidity regulator, texturizer, sequestrant stabilizer, Emulsifier, water retention Agent
526.	331 (ii)	Trisodium citrate	acidity regulator, Sequestrant, emulsifier, Stabilizer
527.	450 (ii)	Trisodium diphosphate	Emulsifier, Stabilizer, acidity regulator, raising agent, Sequestrant, water retention Agent
528.	339 (iii)	Trisodium orthophosphate	acidity regulator, Sequestrant, emulsifier, Texturizer, Stabilizer, water retention agent
529.	100 (ii)	Turmeric	Colour
530.	153	Vegetable carbon	Colour
531.	161 e	Violoxanthin	Colour
532.	910	Wax esters	glazing agent
533.	415	Xanthan gum	Thickener, stabilizer
534.	967	Xylitol	Sweetener, Humectant, stabilizer, Emulsifier, thickener

535.	107	Yellow 2G	Colour
536.	557	Zinc silicate	anticaking agent
Supplementary List-Modified Starches			
537.	1422	Acetylated di-starch adipate	Stabilizer, thickener, binder
538.	1423	Acetylated distarch glycerol	Stabilizer, thickener
539.	1414	Acetylated distarch phosphate	Emulsifier, thickener
540.	1401	Acid-treated starch	Stabilizer, thickener, binder
541.	1402	Alkaline treated starch	Stabilizer, thickener, binder
542.	1403	Bleached starch	Stabilizer, thickener, binder
543.	1400	Dextrins roasted starch white and yellow	Stabilizer, thickener, binder
544.	1411	Di-starch glycerol	Stabilizer, thickener, binder
545.	1412	Di-starch phosphate esterified with sodium trimetaphosphate; esterified with phosphorus oxychloride	Stabilizer, thickener, binder
546.	1443	Hydroxypropyl di-starch glycerol	Stabilizer, thickener
547.	1442	Hydroxypropyl di-starch phosphate	Stabilizer, thickener
548.	1440	Hydroxypropyl starch	Emulsifier, thickener, binder
549.	1410	Monostarch phosphate	Stabilizer, thickener, binder
550.	1404	Oxidized starch	Emulsifier, thickener, binder
551.	1413	Phosphated di-starch phosphate	Stabilizer, thickener, binder
552.	1420	Starch acetate esterified with acetic anhydride	Stabilizer, thickener
553.	1421	Starch acetate esterified with vinyl acetate	Stabilizer, thickener
554.	1450	Starch sodium octenyl succinate	Stabilizer, thickener, binder,

555.	1405	Starches, enzyme-treated	thickener

Note: The principal regulations were published in the Gazette of India, Extraordinary vide notification number F. No. 2-15015/30/2010, dated the 1st August, 2011 and subsequently amendmend vide notification numbers:

1. F.No. 4/15015/30/2011, dated 7th June, 2013;

2. F.No. P. 15014/1/2011-PFA/FSSAI, dated 27th June, 2013;

3. F. No. 5/15015/30/2012, dated 12th July, 2013;

4. F.No. P. 15025/262/2013-PA/FSSAI, dated 5th December, 2014;

5. F.No. 1-83F/Sci. Pan- Noti/FSSAI-2012, dated 17th February, 2015;

6. F.No. 4/15015/30/2011, dated 4th August, 2015;

7. F.No. P.15025/264/13-PA/FSSAI, dated 4th November, 2015;

8. F.No. P. 15025/263/13-PA/FSSAI, dated 4th November, 2015;

9. F.No. P. 15025/261/2013-PA/FSSAI, dated 13th November, 2015;

10. F.No. P. 15025/208/2013-PA/FSSAI, Dated 13th November, 2015;

11. F.No. 7/15015/30/2012, dated 13th November, 2015;

12. F.No. 1-10(1)/Standards/SP9Fish and Fisheries Products)/FSSAI-2013, dated 11th January, 2016;

13. No. 3-16/Specified Foods/Notiifcation(Food Additives)/FSSAI-2014, dated 3rd May, 2016.;

14. F.No. 15-03/Enf/FSSAI/2014, Dated 14th June, 2016;

15. No. 3-14F/Notification (Nutraceuticals)/FSSAI-2013, dated 13th July, 2016;

16. F.No. 1-12/Stnadards/SP (Sweets, Confectionery)/FSSAI-2015, dated 15th July, 2016;

17. F.No. 1-120(1)/Standards/Irradiation/FSSAI-2015, dated 23rd August, 2016;

18. F. No. 11/09/Reg/Harmoniztn/2014, dated 5th September, 2016;

19. F.No. Stds/CPLQ.CP/EM/FSSAI-2015, dated 14th September, 2016;

20. F.No. 11/12 Reg/Prop/FSSAI-2016, dated 10th October, 2016;

21. F.No. 1-110(2)/SP (Biological Hazards)/FSSAI/2010, dated 10th October, 2016;

22. F.No. Stds/SP (Water & Beverages)/Notif (2)/FSSAI-2016, dated 25th October, 2016;

23. F.No. 1-11(1)/Standards/SP (Water & Beverages)/FSSAI-2015, Dated 15th November, 2016;

24. F.No. P.15025/93/2011-PFA/FSSAI, Dated 2nd December, 2016;

25. F.No. P. 15025/6/2004-PFS/FSSAI, dated 29th December, 2016;

26. F.No. Stds/O&F/Notification(1)/FSSAI-2016, dated 31st January, 2017;

27. F.No. 1-12/Standards/2012-FSSAI, dated 13th February, 2017;

28. F.No. 1-10(7)/Standards/SP (Fish & Fisheries Products)/FSSAI-2013, dated 13th February, 2017;

29. F. No. Stds /SCSS&H/ Notification (02)/FSSAI-2016, dated 15th May, 2017;

30. F. No. Stds/03/Notification (LS)/ FSSAI-2017, dated 19th June, 2017;

31. F.No. 1/Additives/Stds/14.2/Notification/FSSAI/2016, dated 31st July, 2017;

32. F.No. Stds/F&VP/Notification(01)/FSSAI-2016, dated 2nd August, 2017;

33. F.No. 1-94(1)/FSSAI/SP(Labelling)/2014, dated 11th September, 2017;

34. F.No. Stds/M&MPIP(1)/SP/FSSAI-2015, dated 12th September, 2017 and

35. No. Stds/SP (Water & Beverages)/Noti(1)/FSSAI-2016,dated 15th September,2017;

36. F.No.1-10(8)/Standards/SP (Fish and Fisheries Products)/FSSAI-2013, dated 15th September, 2017;

37. File No. 2/Stds/CPL & CP/Notification/FSSAI-2016, dated 18th September, 2017;

38. F.No. A-1(1)/Standards/MMP/2012, dated 12th October, 2017;

39. F. No. Stds/O&F/Notification (3)/FSSAI-2016, dated 12th October, 2017;

40. F. No. 2/Stds/CPL & CP/Notification/FSSAI-2016(part), dated 24th October, 2017;

41. F.No. A-1/Stadnards/Agmark/2012-FSSAI(pt.I), dated 17th November, 2017;

42. F.No. 1/Additives/Stds/BIS Notification/FSSAI/2016, dated 17th November, 2017;

43. F.No. Stds/O&F/Notification (5)/FSSAI-2016, dated the 20th February, 2018;

44. F.No. Stds/01-SP(fortified & Enriched Foods)-Reg/FSSAI-2017, dated the 13th March, 2018;

45. F.No. 1/Infant Nutrition/Stds/Notification/FSSAI/2016, dated the 13th March, 2018;

46. F. No.1-110(3)/SP (Biological Hazards)/FSSAI/2010, dated the 21st March, 2018;

47. F.No. Stds/SCSS&H/ Notification (03)/FSSAI-2016, dated 10th April, 2018;

48. No. Stds/CPL&CP/Notification/FSSAI-2016, dated 4th May, 2018;

49. F.No. Stds/SP(SCSSH)/Ice lollies notification/FSSAI-2018, dated 20th July, 2018;

50. F.No. Stds/SP(Water & Beverages)/Notif(3)/FSSAI-2016, dated 20th July, 2018;

51. F.No. Stds/CPL&CP/ Draft Notification/FSSAI-2017, dated 31st July, 2018;

52. File No.1/Additional Additives/Stds/Notification/FSSAI/2016, dated 8th November, 2018;

53. F.No. Stds/03/Notification (CFOI&YC)/FSSAI-2017, dated 16th November, 2018;

54. File No. Stds/O&F/Notification(7)/FSSAI-2017, dated 19th November, 2018;

55. F.No. Stds/M&MP/Notification(02)/FSSAI-2016, dated 19th November, 2018;

56. F. No. Stds/F&VP/Notifications(04)/FSSAI-2016, dated 19th November, 2018;

57. File No. 1-116/Scientific Committee (Noti.)/2010-FSSAI, dated 26th November, 2018;

58. F. No. 02-01/Enf-1(1)/FSSAI-2012, dated 29th January, 2019;

59. F.No. Stds/F&VP/Notification (07)/FSSAI-2018, dated 05th July, 2019;

60. F.No.Stds/O&F/Notification(10)/FSSAI-2017, dated 05th July, 2019;

61. F.No. Stds/SP (Water & Beverages)/Notification(5) FSSAI-2018, dated 30th October, 2019;

62. F.No. M&MP/Misc. Stds/Notification(03)/FSSAI-2018, dated 28th November, 2019;

63. F.No.1-110/SP (Biological Hazards)/Amendment-1/FSSAI/2018, dated 23rd June, 2020;

64. F No. Stds/CPL & CP/Notification/01/FSSAI-2018, dated 9th July, 2020;

65. F.No. Stds/ M&MPIP (3)/SP/FSSAI-2018, dated 9th July, 2020;

66. File No. Stds/CPL & CP/Notification/01/FSSAI-2017, dated 9th July, 2020;

67. F.No.A-1/Standards/Agmark/2012-FSSAI(p+1), dated 23rd July, 2020;

68. F.No. Stds/M&MP/Notification(04)/FSSAI-2019, dated 2nd September, 2020;

69. F.No. Stds/Additives-1/Notification/FSSAI/2018, dated 16th September, 2020;

70. F.No. 1/Additional Additives-III/Stds/Notification/FSSAI/2017, dated 9th October, 2020;

71. F. No. Stds/Processing aids/Notification/FSSAI/2018, dated 9th October, 2020;

72. F. No. 1-116/Scientific Committee/Notif./2010-FSSAI, dated 29th December, 2020;

73. F. No. 1-116/Scientific Committee/Notif.27/2010-FSSAI(E), dated 4th March, 2021;

74. F. No. Stds/O&F/Notification (5)/FSSAI-2017, dated 18th March, 2021;

75. F. No. 1-116/Scientific Committee/Notif.28.4/2010-FSSAI (1), dated 26th July, 2021;

76. F. No. 1-116/Scientific Committee/Notif.28.4/2010-FSSAI(1) (Pt.F), dated 3rd November, 2021; and

77. F. No. Stds/SC/A-1.34/N-1, dated 15th November, 2021.

78. F. No. M&MP/Notification(05)/FSSAI-2019,dated 27th December,2021.