

SALE OF FOOD ACT  
(CHAPTER 283, SECTION 56(1))

FOOD REGULATIONS

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[1st October 1998]

PART I  
PRELIMINARY

**Citation**

1. These Regulations may be cited as the Food Regulations.

**Definitions**

2.—(1) In these Regulations, unless the context otherwise requires —

“container” includes any form of packaging of food for sale as a single item, whether by way of wholly or partly enclosing the food or by way of attaching the food to some other article and in particular includes a wrapper or confining band;

“date-marking”, in relation to a prepacked food, means a date permanently marked or embossed on the package, or on the label on the package signifying the expiry date of that food;

“expiry date”, in relation to a prepacked food, means the date after which the food, when kept in accordance with any storage conditions set out on the label of that food, may not retain its normal wholesomeness, nature, substance and quality;

“food additive” includes —

- (a) all substances, which are components of food, the intended use of which results or may reasonably be expected to result, directly or indirectly, in their affecting the characteristics of food but does not include any foreign substance mixed with food as a result of contamination, or improper handling of the

food during the preparation, processing, packing or storage of the food; and

- (b) anti-caking agents, anti-foaming agents, anti-oxidants, sweetening agents, chemical preservatives, colouring matters, emulsifiers or stabilizers, flavouring agents, flavour enhancers, humectants, nutrient supplements, sequestrants and other general purpose food additives;

*[S 195/2011 wef 15/04/2011]*

“infant” means a person not more than 12 months of age;

“package” includes every means by which food may be cased, enclosed, contained or packed;

“prepacked” means packed or made up in advance ready for sale in a wrapper or container, and where any food packed or made up in a wrapper or container is found on any premises where such food is packed, kept or stored for sale, the food shall be deemed to be prepacked unless the contrary is proved, and it shall not be sufficient proof of the contrary to show that the food had not been labelled in accordance with the provisions of these Regulations;

“premises” means a building or part thereof and any forecourt, yard or place of storage used in connection with a building or part thereof and includes, in relation to dairies and farms, any land other than building;

*[S 493/2013 wef 01/08/2013]*

“trans fatty acids” means the geometrical isomers of monounsaturated and polyunsaturated fatty acids having non-conjugated, interrupted by at least one methylene group, carbon-carbon double bonds in the trans configuration;

*[S 424/2020 wef 01/06/2021]*

“young children” means persons who are more than 12 months but not more than 36 months of age.

*[S 493/2013 wef 01/08/2013]*

(2) In these Regulations, the symbols specified in the first column of the following table shall have the meanings specified in relation to those symbols in the second column of the table:

| <i>First column</i> | <i>Second column</i>                    |
|---------------------|---|
| <i>Symbol</i>       | <i>Meaning</i>                          |
| C                   | degrees in Celsius scale of temperature |
| cm                  | centimetres                             |
| g                   | grams                                   |
| i.u                 | international units                     |
| kcal                | kilocalories                            |
| kg                  | kilograms                               |
| kJ                  | kilojoules                              |
| mcg                 | micrograms                              |
| mg                  | milligrams                              |
| ml                  | millilitres                             |
| mm                  | millimetres                             |
| ppm                 | parts per million                       |
| %                   | per cent                                |
| w/v                 | weight by volume                        |
| w/w                 | weight by weight                        |
| v/v                 | volume by volume.                       |

## PART II

### ADMINISTRATION

#### Fees

**3.** The fees to be paid in respect of any analysis under the Act and any licence issued under these Regulations shall be as specified in the Sale of Food (Fees) Regulations (Rg 4).

**Analyst's certificates for perishable foods**

4. In the case of a certificate of analysis regarding milk, butter, or any food liable to decomposition, the analyst shall in his certificate specifically report whether, prior to the analysis, any change had taken place in the constitution of the article which would interfere with the analysis.

**PART III****GENERAL PROVISIONS****General requirements for labelling**

5.—(1) No person shall import, advertise, manufacture, sell, consign or deliver any prepacked food if the package of prepacked food does not bear a label containing all the particulars required by these Regulations.

(2) Every package of prepacked food shall, unless otherwise provided in these Regulations, bear a label, marked on or securely attached in a prominent and conspicuous position to the package, containing such particulars, statements, information and words in English as are required by the Act and these Regulations.

(3) The particulars, statements, information and words referred to in paragraph (2) shall appear conspicuously and in a prominent position on the label and shall be clearly legible.

(4) The particulars referred to in paragraph (3) shall include —

- (a) the common name, or a description (in the case where a suitable common name is not available) sufficient to indicate the true nature of the food;
- (b) the appropriate designation of each ingredient in the case of food consisting of two or more ingredients and unless the quantity or proportion of each ingredient is specified, the ingredients shall be specified in descending order of the proportions by weight in which they are present.

For the purpose of this sub-paragraph —

- (i) “appropriate designation” means a name or description, being a specific and not a generic name or description, which shall indicate to a prospective purchaser the true nature of the ingredient, constituent or product to which it is applied except as provided in the First Schedule;
  - (ii) it shall not be necessary to state that the food contains water; and
  - (iii) where a food contains an ingredient which is made from two or more constituents, the appropriate designations of those constituents shall be so specified and it shall not be necessary to specify the appropriate designation of that ingredient;
- (c) either one of the following statements in specification of ingredients in the case of a food which contains the synthetic colouring, tartrazine:
- (i) tartrazine;
  - (ii) colour (102);
  - (iii) colour (FD Yellow #5) or other equivalent terms;
- (d) the net quantity of the food in the wrapper or container expressed in the following manner:
- (i) for liquid foods, by volume;
  - (ii) for solid foods, by weight;
  - (iii) for semi-solid or viscous foods, either by weight or volume; and
  - (iv) for a food packed in a liquid medium, by net weight of the food together with the liquid medium, and by drained weight of the food.

For the purpose of this sub-paragraph —

- (i) liquid medium means water, aqueous solutions of sugar and salt, fruit and vegetable juices in canned fruits and vegetables only, or vinegar, either singly or in combination;

- (ii) in the case of weight measure, suitable words like “net” or “drained weight” shall be used to describe the manner of measure; and
- (iii) the declaration of net contents of frozen food that has been glazed shall be exclusive of the glaze, where glazing refers to the application of a protective layer of ice formed at the surface of a frozen product by spraying it with, or dipping it into, clean water;

*[S 195/2011 wef 15/04/2011]*

- (e) the name and address of the manufacturer, packer or local vendor in the case of a food of local origin; and the name and address of the local importer, distributor or agent and the name of the country of origin of the food in the case of an imported food.

For the purpose of this sub-paragraph —

- (i) a telegraphic or code address or an address at a post office shall not be sufficient;
  - (ii) the name appearing on the label shall be presumed to be the name of the manufacturer, packer, local vendor or importer of the food unless proven otherwise. If more than one name appears, the names shall be presumed to be that of the manufacturer, packer, local vendor or importer of the food unless proven otherwise;
- (ea) the following foods and ingredients that are known to cause hypersensitivity:
    - (i) cereals containing gluten, i.e. wheat, rye, barley, oats, spelt or their hybridised strains and their products;
    - (ii) crustacea and crustacean products;
    - (iii) eggs and egg products;
    - (iv) fish and fish products;
    - (v) peanuts, soybeans and their products;

- (vi) milk and milk products (including lactose);
- (vii) tree nuts and nut products; and
- (viii) sulphites in concentrations of 10 mg/kg or more;

[S 195/2011 wef 15/04/2011]

- (f) the following words or any other words to the same effect in the case of any food containing aspartame:

“PHENYLKETONURICS: CONTAINS  
PHENYLALANINE.”; and

- (g) such other particulars as are required by these Regulations to be given in the case of any particular food.

(5) Nothing in paragraph (2) shall prohibit the additional description in any language of the contents of any package or of any particulars desired except that such addition is not contrary to or in modification of any statement required by these Regulations to be printed on the label.

(6) The particulars stated in paragraph (4)(a), (b), (c) and (d) shall be in printed letters not less than 1.5 mm in height.

(7) Notwithstanding anything to the contrary in these Regulations, words required to be printed in a prescribed size may be printed in reduced size clearly legible when a package containing a food for sale is so small as to prevent the use of wording of the prescribed size.

### **Exemptions from regulation 5**

6.—(1) Regulation 5 shall not apply to —

- (a) food weighed, counted or measured in the presence of the purchaser; and
- (b) food which is loosely packed in the retailer’s premises.

(2) Regulation 5, except paragraph (4)(c), (d) and (e) shall not apply to bread which is loosely packed in the retailer’s premises.

(3) Regulation 5(4)(b) shall not apply to intoxicating liquor.

(4) Regulation 5(4)(b) does not apply to prepacked infant formula (within the meaning of regulation 252(1)) that —



- (a) does not contain an ingredient or a food additive, or a proportion of an ingredient or a food additive, which is not permitted by these Regulations for infant formula; and
- (b) bears a label containing —
  - (i) a specific name or description or a generic name or description (whether or not provided in the First Schedule) of every ingredient contained in the infant formula; and
  - (ii) particulars about the ingredients which are otherwise in compliance with regulation 5(4)(b).

[S 302/2017 wef 15/06/2017]

### **Containers to be labelled**

7. Where any article of food is sold other than in a package which is capable of being labelled as required by regulation 5, the person selling the article shall keep conspicuously attached, so as to be clearly visible to the purchaser, to every container in which the article is stored immediately prior to sale, a statement or label containing the particulars specified in regulation 5(4)(a), (b), (d) and (e).

### **Hampers to be labelled**

8. No person shall sell any items of prepacked food which form part of a package or container or which are packed in a package or container for sale as a single item unless there appears on a label, marked on or securely attached to the package or container, the name and business address, in English, of the packer of the package or container.

### **Nutrition information panel**

8A.—(1) No label shall contain any nutrition claim unless it also includes a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General, specifying the energy value, the amounts of protein, carbohydrate, fat and the amount of any other nutrients for which a nutrition claim is made in respect of the food.

(2) Notwithstanding paragraph (1), where any label includes a nutrition claim with respect to salt, sodium or potassium or any two or all of them, but does not include any other nutrition claim, reference to energy or nutrients other than sodium and potassium may be omitted from the panel.

(3) For the purpose of these Regulations, “nutrition claim” means a representation that suggests or implies that a food has a nutritive property, whether general or specific and whether expressed affirmatively or negatively, and includes reference to —

- (a) energy;
- (b) salt, sodium or potassium;
- (c) amino acids, carbohydrates, cholesterol, fats, fatty acids, fibre, protein, starch or sugars;
- (d) vitamins or minerals; or

*[S 195/2011 wef 15/04/2011]*

- (e) any other nutrients.

*[S 195/2011 wef 15/04/2011]*

(4) Paragraph (1) shall not apply to any prepacked food which has a total surface area of less than 100 square centimetres and which has included in the label —

- (a) a statement of the quantity of each nutrient in respect of which the nutrition claim is made; or
- (b) where there is a claim that the food is free of sugar or where there is a claim as to the energy value of the food, a statement of the energy yield of the food.

### **Prohibition on false or misleading statements, etc., on labels**

9.—(1) No written, pictorial, or other descriptive matter appearing on or attached to, or supplied or displayed with food is to include any claim or suggestion whether in the form of a statement, word, brand, picture, or mark purporting to indicate the nature, stability, quantity, strength, purity, composition, weight, origin, age, effects, or proportion of food or its ingredients that is false, misleading or

deceptive, or is likely to create an erroneous impression regarding the value, merit or safety of the food.

(2) Unless permitted by regulation 9A or 9B, a label must not include any claim or suggestion in relation to food that implies —

- (a) the food has therapeutic or prophylactic action;
- (b) the food will prevent, alleviate or cure any disease or condition affecting the human body; or
- (c) that health or an improved physical condition may be achieved by consuming the food.

(3) A label must not include any claim or suggestion that may be interpreted as advice of a medical nature from any person whatsoever.

*[S 49/2016 wef 02/02/2016]*

### **Exceptions from prohibitions on claims on labels**

**9A.**—(1) The claims set out in the first column of the Fourteenth Schedule may be made on prepacked foods that meet the corresponding criteria set out opposite in the second column.

(2) In the case of prepacked foods where the addition of phytosterols, phytosterol esters, phytostanols or phytostanol esters is approved under regulation 250A, the following claim may be made in a label:

“Plant sterols/stanols have been shown to lower/reduce blood cholesterol. High blood cholesterol is a risk factor in the development of coronary heart disease.

*[S 49/2016 wef 02/02/2016]*

(3) In the case of prepacked foods that have added to it barley beta-glucan or oat beta-glucan and meet the criteria in paragraph (4), the following claim may be made in a label:

“Barley beta-glucans/Oat beta-glucans have been shown to lower/reduce blood cholesterol. High blood cholesterol is a risk factor in the development of coronary heart disease.”.

*[S 152/2017 wef 01/04/2017]*

*[S 59/2019 wef 01/02/2019]*

- (4) The criteria mentioned in paragraph (3) are —
- (a) the cholesterol, saturated fatty acids and trans fatty acids present in the food are within the following levels:
- (i) in the case of solid food —
- (A) not more than 20 mg of cholesterol per 100 g;
- (B) not more than 1.5 g of saturated fatty acids and trans fatty acids per 100 g; and
- (C) not more than 10% of kilocalories from saturated fatty acids and trans fatty acids;
- (ii) in the case of liquid food —
- (A) not more than 10 mg of cholesterol per 100 ml;
- (B) not more than 0.75 g of saturated fatty acids and trans fatty acids per 100 ml; and
- (C) not more than 10% of kilocalories from saturated fatty acids and trans fatty acids; and
- (b) the label of the food must contain —
- (i) a statement or statements to the like effect that consumption of at least 3 g of barley beta-glucans or oat beta-glucans (as the case may be) in a day has been shown to lower blood cholesterol levels; and

[S 59/2019 wef 01/02/2019]

- (ii) a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General, specifying the amounts of barley beta-glucan or oat beta-glucan (as the case may be), cholesterol, saturated fatty acids and trans fatty acids, contained in the food.

[S 152/2017 wef 01/04/2017]

[S 59/2019 wef 01/02/2019]

**Limitations on making particular statements or claims on labels**

**9B.**—(1) A label must not include any claim or suggestion that a food is a source of energy unless —

- (a) the label states the quantity of that food to be consumed in one day;
- (b) the amount of the food stated on the label as the quantity to be consumed in one day yields at least 300 kcal; and
- (c) the label contains a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General.

(2) A label must not include any claim or suggestion that a food is a source of or an excellent source of protein unless —

- (a) the label states the quantity of that food to be consumed in one day;
- (b) the amount of food stated on the label as the quantity to be consumed in one day contains at least 10 g of protein;
- (c) the label contains a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General; and
- (d) in the case of —
  - (i) food which is a source of protein, at least 12% by weight of the calorie yield of the food is derived from protein; or
  - (ii) food which is an excellent source of protein, at least 20% by weight of the calorie yield of the food is derived from protein.

(3) A recipe involving the use of any food or any suggestion or pictorial illustration on how to serve the food must not be included on any label unless the recipe, suggestion or pictorial illustration is immediately preceded or followed or otherwise closely accompanied by the expression “Recipe” or “Serving Suggestion”, as the case may be, in printed letters of a minimum of 1.5 mm in height.

(4) No written, pictorial, or other descriptive matter appearing on or attached to, or supplied or displayed with food is to include the word “pure”, or any word of the same significance, in relation to food unless the food is free from other added substances or is of the composition, strength and quality required under these Regulations.

(5) A label must not include the word “organic”, or any word of the same significance, in relation to food unless the food is certified as organic under an inspection and certification system —

- (a) that complies with section 6.3 of the Codex Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods, GL 32-1999; or
- (b) that substantially complies with the guidelines mentioned in sub-paragraph (a) and is acceptable to the Director-General as being a suitable system for the certification of organic food.

[S 49/2016 wef 02/02/2016]

## **Date marking**

**10.—**(1) The prepacked foods specified in the Second Schedule shall bear or have embossed or impressed on the label or elsewhere of the package, a date mark in the manner specified in paragraph (2) or (5) or in such other manner as may be approved by the Director-General.

(2) Subject to paragraph (5), the expiry date in respect of any prepacked food shall be shown in one of the following ways:

- (a) “USE BY (here insert the day, month and year)”;
- (b) “SELL BY (here insert the day, month and year)”;
- (c) “EXPIRY DATE (here insert the day, month and year)”;
- (d) “BEST BEFORE (here insert the day, month and year)”.

(3) Where the validity of the date mark of any prepacked food to which this regulation applies is dependent on its storage, the storage direction of that food shall also be stated on its label or package.

(4) The date mark shall be shown clearly and the size of the letters shall not be less than 3 mm in height.

(5) Where any prepacked food as specified in item 8 of the Second Schedule is a raw produce, it shall be sufficient for the date mark in respect thereof to state the date of packing in the following manner:

“PACKING DATE (here insert the day, month and year)”;

“PACKED ON (here insert the day, month and year)”;

“PKD (here insert the day, month and year)”;

or in such other similar manner as may be approved by the Director-General.

(6) For the purpose of paragraph (5), raw produce shall include —

- (a) raw meat;
- (b) raw minced or chopped meat;
- (c) raw organs;
- (d) raw fish;
- (e) raw crustaceans; and
- (f) raw shellfish,

but shall exclude processed or manufactured food products such as corned, cured, pickled or salted meat, smoked meat, hamburger meat and other burger meat, sausage meat, smoked fish, fish ball and fish cake.

(7) The date referred to in paragraphs (2) and (5) shall be expressed in the following manner:

- (a) the day of the month shall be expressed in figures, where the figure is a single digit it shall be preceded by a zero;
- (b) the month of the year shall be expressed in words and may be abbreviated by using the first 3 letters of the alphabet of the month except that where the day is shown first then followed by the month and year, the month may be expressed in figures; and
- (c) the year shall be expressed in figures in full or by the last two figures of the year.

(8) Notwithstanding anything to the contrary in this regulation, it shall not be necessary to state —

- (a) the year in the date mark of items 1 to 8 of the Second Schedule; or
- (b) the day in the date mark of items 9 to 19 of the Second Schedule.

(9) Where it is impractical to put the whole of the date mark in one place on a label, the date may be put elsewhere on the package if the words “USE BY DATE ON”, “SELL BY DATE ON”, “EXPIRY DATE ON”, “BEST BEFORE DATE ON”, “PACKING DATE ON” or such other words to that effect as may be approved by the Director-General, are followed immediately in each case by a statement of the place on the package where the date is shown.

(10) For the purpose of these Regulations, “BEST BEFORE” has the same meaning as “USE BY”.

(11) Where the products are packed in bulk, it shall be sufficient to state either the date of manufacture or the expiry date.

(12) This regulation shall not apply to dressed birds for which under regulation 60A the date of the slaughtering is required to be stated.

### **Removal, etc., of date marking prohibited**

**10A.** No person shall —

- (a) remove, erase, alter, obscure, superimpose or in any way tamper with any date mark on any prepacked food;
- (b) import, sell, consign or deliver any prepacked food with an expired date mark; or
- (c) import, sell, consign or deliver any prepacked food which has been stored in a condition which contradicts the storage condition specified on the package or the label.

### **Claims as to presence of vitamins and minerals**

**11.—(1)** No claim based on the presence of a vitamin or a mineral or implying the presence of a vitamin or a mineral in a food shall be made on the label unless the reference quantity for that food as laid



down in Table II contains at least one-sixth of the daily allowance as laid down in Table I for the relevant vitamin or mineral.

(2) No label shall claim that any article of food is enriched, fortified, ennobled, vitaminised or in any way imply that the article is an excellent source of one or more vitamins or minerals unless the reference quantity for that food as laid down in Table II contains not less than 50% of the daily allowance as laid down in Table I for the relevant vitamin and mineral.

TABLE I  
VITAMINS AND  
MINERALS

| <i>Substances</i>  | <i>To be calculated as</i>     | <i>Daily Allowance</i> |
|--|--------------------------------|------------------------|
| Vitamin A, vitamin A alcohol and esters, carotenes                           | Micrograms of retinol activity | 750 mcg                |
| Vitamin B1, aneurine, thiamine, thiamine hydrochloride, thiamine mononitrate | Milligrams of thiamine         | 1 mg                   |
| Vitamin B2, riboflavin   | Milligrams of riboflavin       | 1.5 mg                 |
| Vitamin B6, pyridoxine, pyridoxal, pyridoxamine                              | Milligrams of pyridoxamine     | 2.0 mg                 |
| Vitamin B12, cobalamin, cyanocobalamin,                                      | Micrograms of cyanocobalamin   | 2.0 mcg                |
| Folic acid, folate   | Micrograms of folic acid       | 200 mcg                |
| Niacine, niacinamide, nicotinic acid, nicotinamide                           | Milligrams of niacin           | 16 mg                  |
| Vitamin C, ascorbic acid   | Milligrams of ascorbic acid    | 30 mg                  |
| Vitamin D, vitamin D2, vitamin D3  | Micrograms of cholecalciferol  | 2.5 mcg                |
| Calcium  | Milligrams of calcium          | 800 mg                 |
| Iodine   | Micrograms of iodine           | 100 mcg                |
| Iron   | Milligrams of iron             | 10 mg                  |

|            |                          |         |
|------------|--------------------------|---------|
| Phosphorus | Milligrams of phosphorus | 800 mg. |
|------------|--------------------------|---------|

TABLE II

| <i>Food</i>   | <i>Reference Quantity</i> |
|---|---------------------------|
| Bread   | 240 g                     |
| Breakfast cereals   | 60 g                      |
| Extracts of meat or vegetables or yeast (modified or not)   | 10 g                      |
| Fruit and vegetable juices  | 200 ml                    |
| Fruit juice concentrates (diluted according to directions on the label)   | 200 ml                    |
| Fruit juice cordials (diluted according to directions on the label)   | 200 ml                    |
| Flavoured cordials or syrups (diluted according to directions on the label)   | 200 ml                    |
| Malted milk powder  | 30 g                      |
| Condensed milk  | 180 g                     |
| Milk powder (full cream or skimmed) and food containing not less than 51% of milk powder                                      | 60 g                      |
| Other concentrated liquid food including powdered beverage not specified above (diluted according to directions on the label) | 200 ml                    |
| Liquid food not specified above   | 200 ml                    |
| Solid food not specified above  | 120 g                     |

[S 195/2011 wef 15/04/2011]

(3) No label shall contain any statement claiming or implying that the article of food is a source of one or more vitamins or minerals if it contains less than 50% of the recommended daily allowance as laid down in Table I unless the recommended daily intake of the food contains not less than 50% of the recommended daily allowance and unless the recommendation is declared on the label.

[S 152/2017 wef 01/04/2017]

(4) When vitamin A or vitamin D or a mineral is added to a food, the addition must not increase the vitamin A content to more than 750

mcg of retinol activity per reference quantity for that food as specified in Table II, nor increase the content of vitamin D to more than 10 mcg of cholecalciferol or of any mineral to more than 3 times the daily allowance (as specified in Table 1 for that mineral) per reference quantity for that food as specified in Table II.

(5) *[Deleted by S 195/2011 wef 15/04/2011]*

(6) *[Deleted by S 195/2011 wef 15/04/2011]*

(7) Paragraphs (1), (2), (3) and (4) shall not apply to any food exempted under these Regulations nor to infants' foods nor invalids' foods.

### **Misleading statements in advertisements**

**12.** An advertisement for food, other than a label, must not contain any statement, word, brand, picture, or mark that is prohibited by regulation 9, other than to the extent permitted under regulation 9A or 9B.

*[S 49/2016 wef 02/02/2016]*

### **Food and appliances offered as prizes**

**13.—(1)** Where any food, which is intended for human consumption, or any food appliance is offered as a reward in connection with any entertainment to which the public is admitted on payment of a fee or otherwise, these Regulations shall apply in relation to that food or food appliance, as if it were, or had been, exposed for sale by each person concerned in the organisation of the entertainment.

(2) Where any food which is intended for human consumption or any food appliance is offered as a prize or reward or given away for the purposes of advertisement, or in the course of any trade or business, these Regulations shall apply in relation to that food or food appliance, as if it were, or had been, exposed for sale by the person offering it or giving it away.

(3) Where any food which is intended for human consumption or any food appliance is offered as a free gift for charity or any other similar purposes, these Regulations shall apply in relation to that food

or food appliance, as if it were, or had been, exposed for sale by the person offering it or giving it away.

(4) Where any food which is intended for human consumption or any food appliance is exposed or deposited in any premises for the purpose of being offered or given away as indicated in paragraphs (1), (2) and (3), these Regulations shall apply in relation to the food or food appliance, as if it were, or had been, exposed for sale by the occupier of the premises.

### **Imported food to be registered**

**14.—**(1) No person shall import any food that has not been registered with the Director-General.

(2) Imported food is deemed registered in accordance with paragraph (1) if it is imported under a permit to import issued under the Regulation of Imports and Exports Regulations (Cap. 272A, Rg 1) and the following particulars appear on the permit to the satisfaction of the Director-General:

(a) brand name of the product, or if the product has no brand name at the time of import, the name of the manufacturer of the product or the intended brand name of the product;

*[S 195/2011 wef 15/04/2011]*

(b) importer's name;

(c) importer's address;

(d) product description;

(e) country of origin of the product;

(f) quantity and units; and

(g) arrival date.

(3) Paragraph (1) shall not apply to foods imported under licences or permits issued by the Director-General under the Animals and Birds Act (Cap. 7), the Control of Plants Act (Cap. 57A) or the Wholesome Meat and Fish Act (Cap. 349A).

*[S 195/2011 wef 15/04/2011]*

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**FOOD ADDITIVES****Food additives**

**15.—**(1) Subject to paragraphs (2) and (3), no person shall import or manufacture for sale or sell any article of food which contains any food additive which is not permitted by these Regulations.

(2) Notwithstanding paragraph (1), any food may have in it or on it any permitted food additive of the description and in the proportion specified under these Regulations.

(3) Notwithstanding paragraph (1), any food containing as an added ingredient any specified food may contain any such permitted food additive of the description for and of an amount appropriate to the quantity of such specified food in accordance with these Regulations.

(4) No person shall import, sell, advertise, manufacture, consign or deliver any permitted food additive unless the purity of that food additive conforms with the specifications as provided in this Part. Where it is not so provided, the purity of the permitted food additive shall conform with the specifications as recommended by the Joint Food and Agriculture Organisation of the United Nations and World Health Organisation (FAO/WHO) Expert Committee on food additives.

**Anti-caking agents**

**16.—**(1) In these Regulations, “anti-caking agent” means any substance, which, when added to powder food prevents caking of the food.

(2) No person shall import, sell, advertise, manufacture, consign or deliver any article of food which contains an anti-caking agent which is not of a description and not in the proportions as specified in paragraph (3).

(3) Articles of food may contain the following anti-caking agents at a concentration of not more than 2% on a dry basis:

- (a) calcium or magnesium carbonate;
- (b) calcium hydroxyphosphate;
- (c) edible bone phosphate;

(d) ammonium, calcium, magnesium, potassium or sodium stearates;

*[S 195/2011 wef 15/04/2011]*

(e) magnesium silicate (synthetic), magnesium trisilicate or talc;

*[S 195/2011 wef 15/04/2011]*

(f) calcium, sodium aluminium, sodium calcium aluminium or calcium aluminium silicates;

*[S 195/2011 wef 15/04/2011]*

(g) silicon dioxide;

*[S 195/2011 wef 15/04/2011]*

(h) ammonium, calcium, potassium or sodium myristates;

*[S 195/2011 wef 15/04/2011]*

(i) ammonium, calcium, potassium or sodium palmitates; or

*[S 195/2011 wef 15/04/2011]*

(j) calcium, potassium or sodium oleates.

*[S 195/2011 wef 15/04/2011]*

(4) Salt may contain the following anti-caking agents in amounts not exceeding 10 ppm, whether alone or used in combination:

(a) potassium ferrocyanide; or

(b) sodium ferrocyanide.

(5) No person shall sell or advertise for sale, with a view to its use in the preparation of food for human consumption, any anti-caking agent other than a permitted anti-caking agent as specified in paragraphs (3) and (4).

### **Anti-foaming agents**

**16A.—**(1) In these Regulations, “anti-foaming agent” means any substance which prevents or reduces foaming of the food.

*[S 444/2012 wef 03/09/2012]*

- (2) Subject to paragraphs (3) and (4), no person shall —
- (a) import, sell, advertise, manufacture, consign or deliver any article of food which contains an anti-foaming agent; or
  - (b) sell or advertise for sale, with a view to its use in the preparation of food for human consumption any anti-foaming agent.

*[S 195/2011 wef 15/04/2011]*

(3) The following food products may contain the anti-foaming agent known as dimethyl polysiloxane not exceeding 10 ppm in amount:

- (a) edible fats and oils;
- (b) fruit juices and fruit cordials;

*[S 444/2012 wef 03/09/2012]*

- (c) non-alcoholic drinks;

*[S 444/2012 wef 03/09/2012]*

*[S 59/2019 wef 01/02/2019]*

- (d) jams, fruit jellies and marmalades;

*[S 444/2012 wef 03/09/2012]*

*[S 59/2019 wef 01/02/2019]*

- (e) lactobacillus milk drinks or cultured milk drinks;

*[S 59/2019 wef 01/02/2019]*

- (f) flavoured milk;

*[S 59/2019 wef 01/02/2019]*

- (g) ready-to-drink coffee;

*[S 59/2019 wef 01/02/2019]*

- (h) ready-to-drink tea.

*[S 59/2019 wef 01/02/2019]*

(4) Colouring mixes for inking on food surfaces may contain dimethyl polysiloxane not exceeding 50 ppm in amount.

*[S 195/2011 wef 15/04/2011]*

**Anti-oxidants**

17.—(1) In these Regulations, “anti-oxidant” means any substance which delays, retards or prevents the development in food of rancidity or other flavour deterioration due to oxidation.

(2) Subject to paragraph (3), no person shall import, sell, advertise, manufacture, consign or deliver any article of food containing any added anti-oxidant other than ascorbic acid, erythorbic acid, citric acid, phosphoric acid, lecithin and tocopherols.

(3) Paragraph (2) shall not apply to —

- (a) any food which contains other anti-oxidants of a description and in the proportions specified in the Third Schedule; and
- (b) any mixed food containing one or more of the foods in which specific anti-oxidants are expressly provided as indicated in the Third Schedule and which contains an admixture of these anti-oxidants in not greater amount than is specifically allowed in the quantity of food or foods containing the anti-oxidants used in the preparation of the mixed food.

**Sweetening agents**

18.—(1) In these Regulations —

“steviol glycosides” means any of the following:

- (a) steviol glycosides from *Stevia rebaudiana* Bertoni;
- (b) Rebaudioside A from multiple gene donors expressed in *Yarrowia lipolytica*;
- (c) Rebaudioside M produced by enzymatic modification of Rebaudioside A extracted from Stevia leaf, using the enzymes UDP-glucosyltransferase (EC 2.4.1.17) and sucrose synthase (EC 2.4.1.13), produced by genetically modified strains of *Escherichia coli* K-12 W311;
- (d) Rebaudioside M produced by enzymatic conversion of purified Stevia leaf extract, using the enzymes



UDP-glucosyltransferase (EC 2.4.1.17) and sucrose synthase (EC 2.4.1.13), produced by genetically modified strains of *Pichia pastoris*;

“sweetening agent” means a substance added to food in place of sugar to provide a sweet taste, but does not include aspartame, any sugar, carbohydrate or polyhydric alcohols.

[S 704/2020 wef 31/08/2020]

(2) Subject to paragraphs (3) and (3A), a person must not import, sell, advertise, manufacture, consign or deliver —

(a) any sweetening agent for use in food; or

(b) any food containing any sweetening agent.

[S 49/2016 wef 02/02/2016]

(3) The foods specified in the Thirteenth Schedule may contain the following sweetening agents up to the proportions specified in that Schedule:

| <i>Substance</i>  | <i>Descriptive Name</i> | <i>Descriptive No.</i> |
|---|-------------------------|------------------------|
| (a) Acesulfame-K  | Acesulfame-K            | 1                      |
| (b) Saccharin and its calcium, potassium and sodium salts | Saccharin               | 2                      |
| (c) Cyclamic acid and its calcium and sodium salts        | Cyclamates              | 3                      |
| (d) Neotame   | Neotame                 | 4                      |
| (e) Steviol glycosides                                    | Steviol glycosides      | 5                      |
| (f) Sucralose   | Sucralose               | 6.                     |

[S 49/2016 wef 02/02/2016]

(3A) Advantame may be added to any food in accordance with good manufacturing practice for food additives as described in

section 3.3 of the preamble of the Codex General Standard for Food Additives (CODEX STAN 192-1995).

[S 49/2016 wef 02/02/2016]

(3B) Monk fruit extract may be added to any food in accordance with good manufacturing practice for food additives as described in section 3.3 of the preamble of the Codex General Standard for Food Additives (CODEX STAN 192-1995), if the monk fruit extract contains —

- (a) mogroside V of not less than 20% (w/w) and not more than 90% (w/w);
- (b) not more than 1 mg/kg lead;
- (c) not more than 1 mg/kg arsenic;
- (d) not more than 5% (w/w) ash; and
- (e) not more than 6% (w/w) moisture.

[S 59/2019 wef 01/02/2019]

(4) Food products containing sweetening agents shall, where required in the Thirteenth Schedule, carry advisory statements regarding consumption by children in the manner specified therein.

(5) The base for sweetening agent tablets may contain —

- (a) calcium stearate; and
- (b) croscarmellose sodium.

[S 195/2011 wef 15/04/2011]

## Chemical preservatives

**19.—**(1) In these Regulations, “chemical preservative” means any substance which is capable of inhibiting, retarding or arresting the process of fermentation, acidification or other deterioration of food caused by micro-organisms.

(2) Chemical preservatives shall be divided into the following classes:

- (a) Class I chemical preservatives shall be —
  - (i) common salt;

(ii) sugars;

(iii) vinegar or acetic acid, lactic acid, ascorbic acid, erythorbic acid, citric acid, malic acid, phosphoric acid, tartaric acid, or propionic acid or the calcium, potassium or sodium salts of any of the acids specified in this sub-paragraph; and

[S 59/2019 wef 01/02/2019]

(iv) ethyl alcohol or potable spirits;

[S 493/2013 wef 01/08/2013]

(b) Class II chemical preservatives shall be —

| <i>Substance.</i>   | <i>Descriptive Name.</i>     | <i>Descriptive No.</i> |
|---|------------------------------|------------------------|
| (i) Sulphur dioxide, sulphurous acid or any of its sodium, potassium or calcium salts | Sulphur dioxide              | 1                      |
| (ii) Benzoic acid and its sodium and potassium salts                                  | Benzoic acid                 | 2                      |
| (iii) Methyl para-hydroxy-benzoate and its sodium salt                                | Methyl para-hydroxy-benzoate | 3                      |
| (iv) Sorbic acid and its sodium, potassium or calcium salts                           | Sorbic acid                  | 4                      |
| (v) [Deleted by S 59/2019 wef 01/02/2019]   |                              |                        |
| (vi) Nitrites of sodium or potassium  | Nitrites                     | 5                      |
| (vii) Nitrates of sodium or potassium   | Nitrates                     | 6; and                 |

[S 146/2018 wef 28/03/2018]

[S 59/2019 wef 01/02/2019]

(c) Class III chemical preservative shall be dimethyl dicarbonate.

[S 493/2013 wef 01/08/2013]

(3) (a) The additions of any Class I chemical preservatives in any food in any proportion is not restricted.

(b) No person shall import, sell, advertise, manufacture, consign or deliver any article of food which contains a Class II chemical preservative, except that —

- (i) any specified food may contain one of the Class II chemical preservatives in the proportion specified in Part I of the Fourth Schedule except as provided in sub-paragraph (ii); and

*[S 493/2013 wef 01/08/2013]*

- (ii) any specified food in relation to which 2 or more Class II chemical preservatives are specified in the Fourth Schedule may contain an admixture of those chemical preservatives if, when the quantity of each such chemical preservative present in that food is expressed as a percentage of the maximum quantity of that chemical preservative appropriate to that food in accordance with Part I of that Schedule, the sum of those percentages does not exceed 100.

*[S 493/2013 wef 01/08/2013]*

(c) No person shall import, sell, advertise, manufacture, consign or deliver any article of food to which a Class III chemical preservative has been added, except that a Class III chemical preservative may be added to any food, and in such proportion, specified in Part II of the Fourth Schedule.

*[S 493/2013 wef 01/08/2013]*

### **Colouring matter**

**20.—**(1) In these Regulations, “colouring matter” means any substance that, when added or applied to food, is capable of imparting colour to that food.

(2) No person shall import, sell, advertise, manufacture, consign or deliver —

- (a) any article of food intended for human consumption which contains any added colouring matter other than a permitted colouring matter as listed in the Fifth Schedule;
- (b) any colouring matter for use in food intended for human consumption other than a permitted colouring matter, as listed in the Fifth Schedule; or
- (c) any permitted synthetic organic colour, as listed in Part I of the Fifth Schedule which contains alpha naphthylamine, beta-naphthylamine, benzidine, paraaminodiphenyl (xenylamine) or their derivatives and the polycyclic aromatic hydrocarbons.

(3) No person shall sell, expose or offer for sale, consign, deliver or import any meat, poultry, fish, fruit or vegetable in the raw or unprocessed state, which has in it or on it (otherwise than for the purpose of marking) any added colouring matter except that the husk of any nut may have on it added permitted colouring matter.

### **Emulsifiers and stabilisers**

**21.—**(1) In these Regulations, the terms “emulsifier” or “stabiliser” means any substance which is capable, in the case of an emulsifier, of aiding the formation of, and in the case of a stabiliser, of maintaining, the uniform dispersion of 2 or more immiscible substances.

(2) Unless as otherwise indicated, no person shall import or manufacture for sale or sell any article of food which contains any emulsifier or any stabiliser which is not a permitted emulsifier or a permitted stabiliser, as specified in the Sixth Schedule.

(3) Non-alcoholic drinks may contain —

- (a) ester gum in an amount not exceeding 100 ppm; and
- (b) sucrose acetate isobutyrate in an amount not exceeding 300 ppm.

(3A) Quillaia extracts (Type I, II or both) may be used only in —

- (a) soft drinks, at a level not exceeding 50 ppm (calculated as saponins); and

- (b) alcoholic beverages, at a level not exceeding 40 ppm (calculated as saponins).

*[S 152/2017 wef 01/04/2017]*

(4) No person shall sell or advertise for sale, with a view to its use in the preparation of food for human consumption, any emulsifier or any stabiliser other than a permitted emulsifier or a permitted stabiliser.

(5) No person shall sell any permitted emulsifier or permitted stabiliser with a view to its use in the preparation of food for human consumption except in a package bearing a label, on which is printed a true statement of the chemical nature of the emulsifier or stabiliser.

### **Flavouring agents**

**22.—**(1) In these Regulations, “flavouring agent” means any wholesome substance that when added or applied to food is capable of imparting taste or odour, or both, to a food.

(2) No person shall import, sell, advertise, manufacture, consign or deliver any natural or synthetic flavouring essence or extract which is contained in a solvent other than a permitted solvent, namely, 1,3-propanediol, benzyl alcohol, beta-cyclodextrin, diacetin, diethyl ether, ethyl acetate, ethyl alcohol, glycerol, isopropyl alcohol, propylene glycol, triacetin and water.

*[S 195/2011 wef 15/04/2011]*

*[S 444/2012 wef 03/09/2012]*

*[S 59/2019 wef 01/02/2019]*

(3) The permitted solvents referred to in paragraph (2) other than water shall conform with the British Pharmacopoeia standard.

(4) The permitted flavouring compounds may also be carried in an emulsion of a permitted emulsifier as provided under regulation 21 with any of the permitted solvents mentioned in this regulation.

(5) Natural flavouring agents shall include natural flavouring essences, spices and condiments.

(6) Natural flavouring essences or extracts shall be preparations in any permitted solvent or any combination of permitted solvents, with or without sweeteners other than sweetening agents, permitted colouring matter or chemical preservatives, of sapid or odoriferous

principles, or both, derived from a plant after which the flavouring extract or essence is named.

*[S 195/2011 wef 15/04/2011]*

(7) The use of coumarin, tonka bean, safrole, sassafras oil, dihydrosafrole, isosafrole, agaric acid, nitrobenzene, dulcamara, pennyroyal oil, oil of tansy, rue oil, birch tar oil, cade oil, volatile bitter almond oil containing hydrocyanic acid and male fern as flavouring agents is prohibited.

(8) Articles of food may have in them natural flavouring agents as specified in these Regulations.

(9) Synthetic flavouring essences or extracts shall include any artificial flavour or imitation flavour which may resemble the sapid or odoriferous principles of an aromatic plant, fruit or vegetable or any other food, except that the flavouring principle shall be derived in whole, or in part, from either chemical synthesis or any other sources that does not involve extraction or isolation therefrom of the sapid or odoriferous principles present in an aromatic plant, fruit or vegetable or any other food.

(10) No person shall import, sell, advertise, manufacture, expose or offer for sale, consign or deliver with a view to it being used in the preparation of food for human consumption, any synthetic flavouring essence or extract which contains any of the prohibited substances specified in paragraph (7).

### **Flavour enhancers**

**23.—**(1) In these Regulations, “flavour enhancer” means any substance which is capable of enhancing or improving the flavour of food, but does not include any sauce, gravy, gravy mix, soup mix, spice or condiment.

(2) No person shall import, sell, advertise, manufacture, consign or deliver any flavour enhancer for use in food intended for human consumption other than:

(a) ethyl maltol;

(b) L-glutamic acid, mono-sodium L-glutamate, monopotassium L-glutamate, calcium di-L-glutamate,

monoammonium L-glutamate and magnesium di-L-glutamate;

*[S 444/2012 wef 03/09/2012]*

- (c) Inosinic acid, guanylic acid, di-sodium 5'-inosinate, di-potassium 5'-inosinate, calcium 5'-inosinate, disodium 5'-guanylate, di-potassium 5'-guanylate and calcium 5'-guanylate;

*[S 444/2012 wef 03/09/2012]*

*[S 152/2017 wef 01/04/2017]*

- (d) L-cysteine; and

*[S 152/2017 wef 01/04/2017]*

- (e) L-theanine in the following foods at a level not exceeding 1000 ppm:

- (i) brewed tea;
- (ii) soft drinks;
- (iii) chocolate;
- (iv) chocolate confectionery;
- (v) sugar confectionery.

*[S 152/2017 wef 01/04/2017]*

(3) No person shall import, sell, advertise, manufacture, consign or deliver the flavour enhancer mono-sodium salt of L-glutamic acid unless it conforms with the prescribed standards under regulation 246.

(4) *[Deleted by S 444/2012 wef 03/09/2012]*

(5) No person shall import, sell, advertise, manufacture, consign or deliver any article of food intended for human consumption containing a flavour enhancer other than a permitted flavour enhancer specified in paragraph (2).

## Humectants

**24.** In these Regulations, “humectant” means any substance which, when added to food, absorbs moisture and maintains the water content of food.



## Nutrient supplements

**25.—**(1) In these Regulations, “nutrient supplement” means any amino acid, mineral or vitamin which, when added either singly or in combination with food, improves or enriches the nutrient content of food.

(2) The addition of a nutrient supplement other than a permitted nutrient supplement specified in the Seventh Schedule to any article of food for human consumption is prohibited.

(3) Notwithstanding paragraph (2), nutrient supplements, other than a permitted nutrient supplement, may be added to special purpose food provided regulations 247 to 254 are complied with.

## Sequestrants

**26.—**(1) In these Regulations, “sequestrant” means any substance which, when added to food, combines with a metal ion in the food and renders the metal ion inactive so as to stabilise certain characteristics associated with the food, including colour, flavour and texture.

(2) No person shall sell or advertise for sale, with a view to its use in the preparation of food for human consumption, any sequestrant other than a permitted sequestrant specified in paragraphs (3) and (4).

(3) Citric acid, phosphoric acid, and tartaric acid or the calcium salts of the abovementioned acids, as well as glycine may be added to food to serve as sequestrants.

(4) Calcium disodium ethylenediaminetetraacetate may be used only in —

(a) canned fish, including crustaceans and molluscs, at a level not exceeding 250 ppm;

*[S 444/2012 wef 03/09/2012]*

(b) mayonnaise, salad dressing, French dressing, fat spread, savoury sauce and margarine at a level not exceeding 75 ppm; and

(c) soft drinks at a level not exceeding 33 ppm.

*[S 195/2011 wef 15/04/2011]*

**Gaseous packaging agents**

27.—(1) In these Regulations, “gaseous packaging agent” means any substance used —

- (a) as an aerating agent or propellant in the storage or packaging of any fluid food; or
- (b) to displace air in a sealed package or in a place of storage, in the storage or packaging of any food.

(2) No person shall use in the storage or packaging of any food any gaseous packaging agent other than —

- (a) carbon dioxide;
- (b) nitrogen; and
- (c) helium.

**General purpose food additives**

28.—(1) In these Regulations, “general purpose food additive” means any substance which serves a useful and specific purpose during either the processing or packing of a food and shall include processing aid.

(2) No person shall use any general purpose food additive other than those specified in the Eighth Schedule or permitted for use under this regulation.

*[S 704/2020 wef 31/08/2020]*

(3) No person shall import, sell, advertise, manufacture, consign or deliver any food containing any permitted general purpose food additive unless the food is sound and fit for human consumption.

(4) No person shall import, sell, advertise, manufacture, consign or deliver any food containing residue of acetone unless —

- (a) in the case of flavouring, where acetone is used as a processing aid in the production of the flavouring, the residue of acetone does not exceed 5 mg/kg of the flavouring; or
- (b) in the case of any food or any food containing flavouring, where acetone is used as a processing aid in the production

of the food or in the production of one or more of its ingredients, the residue of acetone does not exceed 0.1 mg/kg of the food.

(5) Methanol may be used as an extraction solvent in food, provided that the residue of methanol in the food does not exceed 5 ppm.

(6) Triethyl citrate may be used as a whipping agent in the following foods, at a level not exceeding 2500 ppm:

- (a) liquid egg products;
- (b) dried egg products, whether or not heat coagulated;
- (c) heat coagulated egg products.

[S 152/2017 wef 01/04/2017]

(7) Soy leghemoglobin derived from genetically modified *Pichia pastoris* may be used in meat analogues, at a level not exceeding 0.45% (w/w).

[S 704/2020 wef 31/08/2020]

## INCIDENTAL CONSTITUENTS IN FOOD

### Incidental constituents in food

**29.—**(1) In these Regulations, “incidental constituent” means any extraneous substance, toxic substance, pesticide, heavy metal, veterinary drug or mycotoxin that is introduced into or on a food in any manner whatsoever, but does not include any anti-caking agent, anti-oxidant, sweetening agent, chemical preservative, colouring matter, emulsifier and stabiliser, flavouring agent, flavouring enhancer, humectant, nutrient supplement, sequestrant or gaseous packaging agent.

[S 195/2011 wef 15/04/2011]

[S 49/2016 wef 02/02/2016]

(2) A person must not import, sell, advertise, manufacture, consign or deliver any food containing an incidental constituent except as otherwise permitted by these Regulations.

[S 49/2016 wef 02/02/2016]

(3) In this regulation, “veterinary drug” means a substance applied or administered to a food-producing animal including a meat-producing or milk-producing animal, poultry, fish and bee, whether or not the substance is used for therapeutic, prophylactic or diagnostic purpose or for modification of physiological functions or behaviour, and includes antibiotic and oestrogen.

[S 49/2016 wef 02/02/2016]

### **Pesticide residues**

**30.**—(1) In these Regulations, “pesticide” means a substance or compound used or capable of being used or intended for use for agricultural, pastoral, horticultural, domestic or industrial purposes for controlling, destroying or preventing the growth and development of any fungus, bacterium, virus, insect, mite, mollusc, nematode, plant or animal or for any other related purpose.

(2) No person shall import, sell, advertise, manufacture, consign or deliver any article of food containing any pesticide residue other than those specified in column 1, in relation to those articles specified in column 3 and in the proportion specified in column 2 of the Ninth Schedule.

(3) Unless otherwise prescribed in these Regulations, the pesticide residue contained in any food must not exceed the maximum limit or extraneous maximum residue limit stated for the residue adopted by the Codex Alimentarius Commission.

[S 49/2016 wef 02/02/2016]

[S 146/2018 wef 28/03/2018]

(4) A manufactured or mixed food containing one or more of the foods in which pesticide residues are permitted shall not contain such residues in greater amount than is permitted for the quantity of the food or foods containing residues used in the preparation of the manufactured or mixed food.

(5) No person shall import, sell, advertise, manufacture, consign or deliver any article of food containing the residue of 2 or more of the pesticides specified in the Ninth Schedule unless the sum of the fractions obtained by dividing the quantity of the pesticide present by

the maximum quantity of each pesticide permitted to be present if used alone does not exceed unity.

### **Heavy metals, arsenic and lead**

**31.—**(1) No person shall import, sell, advertise, manufacture, consign or deliver any article of food containing arsenic and lead in amounts in excess of those specified in the Tenth Schedule.

*[S 59/2019 wef 01/02/2019]*

(2) No person shall import, sell, advertise, manufacture, consign or deliver any seaweed containing inorganic arsenic in excess of 2 ppm.

(2A) A person must not import, sell, advertise, manufacture, consign or deliver any polished rice containing inorganic arsenic in excess of 0.2 ppm.

*[S 152/2017 wef 01/04/2017]*

(2B) A person must not import, sell, advertise, manufacture, consign or deliver any husked rice containing inorganic arsenic in excess of 0.35 ppm.

*[S 59/2019 wef 01/02/2019]*

### **Mercury**

(3) No person shall import, sell, advertise, manufacture, consign or deliver —

- (a) any predatory fish containing mercury in excess of 1 ppm;
- (b) any other fish, or any fish product, containing mercury in excess of 0.5 ppm; or
- (c) any other food containing mercury in excess of 0.05 ppm.

*[S 816/2014 wef 15/12/2014]*

### **Tin**

(4) No person shall import, sell, advertise, manufacture, consign or deliver any food containing tin in excess of 250 ppm.

### **Cadmium**

(5) No person shall import, sell, advertise, manufacture, consign or deliver any molluscs or dried mushrooms containing cadmium in

excess of 1 ppm, or any seaweed containing cadmium in excess of 2 ppm, or any cocoa or cocoa products containing cadmium in excess of 0.5 ppm, or any other food containing cadmium in excess of 0.2 ppm.

[S 195/2011 wef 15/04/2011]

### **Antimony**

(6) No person shall import, sell, advertise, manufacture, consign or deliver any food containing antimony in excess of 1 ppm.

(7) In paragraph (3), “predatory fish” means any fish of a species listed in the Fifteenth Schedule.

[S 816/2014 wef 15/12/2014]

### **Antibiotic residues**

**32.**—(1) In these Regulations, “antibiotic” means any chemical substance, produced either by chemical synthesis or by a micro-organism which in low concentration has the capability to inhibit the growth of or to destroy bacteria and other micro-organisms.

(2) Subject to paragraph (3), no person shall import, sell, advertise, manufacture, consign or deliver, any milk, meat and meat products, or any article of food intended for human consumption which contains detectable antibiotic residues or their degradation products.

(3) Notwithstanding paragraph (2), nisin may be employed in the preservation of liquid egg products, liquid egg analogues, cheese and canned foods which have been sufficiently heat processed to destroy spores of *Clostridium botulinum*.

[S 444/2012 wef 03/09/2012]

[S 59/2019 wef 01/02/2019]

### **Oestrogen residues**

**33.** No person shall import, sell, advertise, manufacture, consign or deliver, any meat or any food derived from meat which contains residues of the following compounds:

- (a) diethylstilbestrol (3, 4-bis(p-hydroxyphenyl)-3-hexene);
- (b) hexoestrol (3, 4-bis(p-hydroxyphenyl)-n-hexane);

(c) dienoeestrol (3, 4-bis(p-hydroxyphenyl)-2, 4-hexadiene).

### **Mycotoxins**

**34.** No person shall import, sell, advertise, manufacture, consign or deliver any article of food containing any detectable amount of mycotoxins, unless the detectable amount of mycotoxin for any specified food does not exceed the maximum amount specified as follows:

| <i>Mycotoxin</i>                          | <i>Type of food</i>  | <i>Maximum amount of any one or more Mycotoxins in parts per billion</i> |
|---|--|--|
| (a) Aflatoxin B1                          | (i) Any article of food except food for infants or young children            | 5  |
|   | (ii) Food for infants or young children                                      | 0.1  |
| (b) Aflatoxins, total (B1, B2, G1 and G2) | Any article of food except food for infants or young children                | 5  |
| (c) Aflatoxin M1                          | (i) Milk   | 0.5  |
|   | (ii) Infant formula  | 0.025 calculated on the reconstituted ready-to-drink product             |
| (d) Patulin                               | (i) Food for infants or young children (except processed cereal-based foods) | 10   |

- |   |    |
|---|----|
| (ii) Fruit juice                                      | 50 |
| (iii) Food containing<br>fruit juice as<br>ingredient | 50 |

[S 493/2013 wef 01/08/2013]

### **3-monochloropropane-1,2-diol (3-MCPD)**

**34A.** No person shall import, sell, advertise, manufacture, consign or deliver any soy sauce or oyster sauce containing 3-monochloropropane-1,2-diol (3-MCPD) in excess of 20 parts per billion, calculated on 40% dry matter content.

[S 444/2012 wef 03/09/2012]

### **Melamine**

**34B.** No person shall import, sell, advertise, manufacture, consign or deliver —

- (a) any powdered infant formula containing melamine in excess of 1 ppm;
- (b) any liquid infant formula (as consumed) containing melamine in excess of 0.15 ppm; or
- (c) any food (other than powdered infant formula or liquid infant formula (as consumed)) containing melamine in excess of 2.5 ppm.

[S 493/2013 wef 01/08/2013]

### **Microbiological standards**

**35.—(1)** A person must not import, sell, manufacture or produce for sale, any article of ready-to-eat food that does not comply with any relevant microbiological standard specified in the Eleventh Schedule.

(2) In these Regulations, “ready-to-eat food” —

- (a) means any article of food that is made available for sale for direct human consumption without the need for cooking or any other form of processing to eliminate, or reduce to a



microbiological standard specified in the Eleventh Schedule, any pathogenic or other micro-organism of concern in the article of food; and

- (b) includes cup noodles, fruit juice cordial, squash or syrup, powdered beverages and other concentrated food which are meant to be reconstituted or diluted with fluids before consumption.

[S 237/2020 wef 03/04/2020]

## MINERAL HYDROCARBONS

### Use of mineral hydrocarbons

**36.—**(1) In these Regulations, “mineral hydrocarbon” means any hydrocarbon product, whether liquid, semi-liquid or solid, derived from petroleum or synthesized from petroleum gases and includes odourless light petroleum hydrocarbons, white mineral oils, halogenated hydrocarbons, petroleum jellies, hard paraffins and micro-crystalline waxes.

(2) Unless exempted under these Regulations, mineral hydrocarbons shall not be used in the composition or preparation of any article of food intended for human consumption, and no article of food containing any mineral hydrocarbon shall be sold for human consumption.

(3) Paragraph (2) shall not apply in relation to —

- (a) any dried fruit containing not more than 0.5 part by weight of mineral hydrocarbon per 100 parts by weight of dried fruit;
- (b) any citrus fruit containing not more than 0.1 part by weight of mineral hydrocarbon per 100 parts by weight of citrus fruit;
- (c) any sugar confectionery containing mineral hydrocarbon by reason of the use of mineral hydrocarbon as a polishing or glazing agent for confectionery if such confectionery contains by reason thereof not more than 0.2 part by weight of mineral hydrocarbon per 100 parts by weight of such confectionery;

- (d) any chewing compound which contains no more than 60 parts by weight of solid mineral hydrocarbon per 100 parts by weight of chewing compound and otherwise contains no mineral hydrocarbon;
- (e) any whole pressed cheese or part thereof containing mineral hydrocarbon by reason of the use of mineral hydrocarbon on the rind;
- (f) any egg, laid by any domestic fowl or domestic duck which contains mineral hydrocarbon by reason of its having been subjected to a process of preservation consisting of being dipped in, sprayed with or otherwise treated with mineral hydrocarbon;

[S 59/2019 wef 01/02/2019]

- (g) any food containing mineral hydrocarbon —
  - (i) by reason of the use in the composition of that food of dried fruit, citrus fruit or sugar confectionery, or any one or more of those commodities, containing mineral hydrocarbon not in excess of the relevant quantities permitted in accordance with subparagraphs (a), (b) and (c);
  - (ii) by reason of the use of mineral hydrocarbon as a lubricant or greasing agent on some surface with which that food has necessarily to come into contact during the course of preparation if that food contains by reason thereof not more than 0.2 part by weight of mineral hydrocarbon per 100 parts by weight of the food;
- (h) food containing residues of mineral hydrocarbon resulting from its use as a solvent in the manufacture, provided that the tolerance limit for a specified food as indicated hereafter is not exceeded:

| <i>Mineral Hydrocarbon.</i> | <i>Name of food.</i>        | <i>Tolerance (ppm).</i> |
|-----------------------------|-----------------------------|-------------------------|
| Trichloroethylene           | Decaffeinated ground coffee | 25                      |

| <i>Mineral Hydrocarbon.</i> | <i>Name of food.</i>                           | <i>Tolerance (ppm).</i> |
|-----------------------------|--|-------------------------|
|                             | Decaffeinated soluble (instant) coffee extract | 10                      |
|                             | Spice oleoresins                               | 30                      |
|                             | Edible vegetable oil                           | 10                      |
| Methylene chloride          | Decaffeinated ground coffee                    | 10                      |
|                             | Decaffeinated soluble (instant) coffee extract | 10                      |
|                             | Spice oleoresins                               | 30                      |
| Ethylene dichloride         | Spice oleoresins                               | 30                      |
| Hexane                      | Spice oleoresins                               | 25                      |
|                             | Edible vegetable oil                           | 10.                     |

Where the use of more than one chlorinated hydrocarbon is expressly permitted in a specified food, the total residue of chlorinated hydrocarbon in that food shall not exceed 30 ppm.

## PARTIALLY HYDROGENATED OILS

### Partially hydrogenated oils

**36A.**—(1) A person must not —

- (a) import any edible fat or oil that contain any partially hydrogenated oil for use as an ingredient of any other edible fat or oil or any prepacked food; or
- (b) use any edible fat or oil that contain any partially hydrogenated oil as an ingredient in the manufacture of any other edible fat or oil or any prepacked food.

(2) In these Regulations, “partially hydrogenated oil” means any edible fat or oil that has undergone the process of hydrogenation but is not fully saturated as a result of that process.

[S 424/2020 wef 01/06/2021]

## CONTAINERS FOR FOOD

**Containers for food**

**37.—**(1) No person shall import, sell, consign or deliver, or use or permit to be used in the preparation, packing, storage or delivery of, any food for sale if any package or container —

- (a) contains more than 1 ppm of vinyl chloride monomer;
- (b) yields, or is likely to yield, to its contents more than 0.01 ppm of vinyl chloride monomer; or
- (c) yields, or is likely to yield, to its contents any compounds known to be carcinogenic, mutagenic or teratogenic or any other poisonous or injurious substance.

*[S 444/2012 wef 03/09/2012]*

(2) No person shall import, sell, consign or deliver, use or permit to be used any appliance, container or vessel that is intended for use in the storage, preparation or cooking of food, and is either capable of imparting lead, antimony, arsenic, cadmium or any other toxic substance to any food stored, prepared or cooked in it.

(3) Nothing in paragraph (2) shall prohibit the import, sale, consignment, delivery or use of any ceramic food ware where —

- (a) the maximum amount of lead in any one of six units examined is not more than 3.0 mcg of lead per ml of leaching solution in the case of a flatware with an internal depth of not more than 25 mm;
- (b) the maximum amount of lead in any one of six units examined is not more than 2.0 mcg of lead per ml of leaching solution in the case of a small hollow-ware with a capacity of less than 1.1 litres but excluding cups and mugs;
- (c) the maximum amount of lead in any one of six units examined is not more than 1.0 mcg of lead per ml of leaching solution in the case of a large hollow-ware with a capacity of 1.1 litres or more but excluding pitchers;

- (d) the maximum amount of lead in any one of six units examined is not more than 0.5 mcg of lead per ml of leaching solution in the case of cups and mugs; and
  - (e) the maximum amount of lead in any one of six units examined is not more than 0.5 mcg of lead per ml of leaching solution in the case of pitchers.
- (4) No person shall use any lead piping for the conveyance of beer, cider or other beverages or liquid food.

## IRRADIATED FOOD

### Irradiated food

**38.—**(1) No person shall import or sell any food which has been exposed to ionizing radiation unless —

- (a) such ionizing radiation has been conducted in accordance with the requirements of —

- (i) the Codex Code of Practice for Radiation Processing of Food (CAC/RCP 19-1979); and

*[S 49/2016 wef 02/02/2016]*

- (ii) the Codex General Standard for Irradiated Foods (CODEX STAN 106-1983); and

*[S 49/2016 wef 02/02/2016]*

- (b) such irradiated food meets all the requirements of the Codex General Standard for Irradiated Foods (CODEX STAN 106-1983).

*[S 195/2011 wef 15/04/2011]*

*[S 49/2016 wef 02/02/2016]*

(2) (a) There shall be written on the labels on or attached to a package containing food that has been processed by ionizing radiation, the following words, printed in letters of not less than 3 mm height:

“TREATED WITH IONIZING IRRADIATION”

or

“IRRADIATED (*here insert the name of the food*)”.

(b) When an irradiated food is used as an ingredient in another food, this shall be so declared in the statement of ingredients.

(c) When a single ingredient product is prepared from a raw material which has been irradiated, the label of the product shall contain a statement indicating the treatment.

## PART IV

### STANDARDS AND PARTICULAR LABELLING REQUIREMENTS FOR FOOD

#### *Flour, bakery and cereal products*

#### **Flour or wheat flour**

**39.**—(1) Flour or wheat flour shall be the fine, clean and sound product obtained in the commercial milling of sound and clean wheat grain and shall —

- (a) have a moisture content of not more than 15%;
- (b) have not less than 6% protein (total nitrogen x 5.7) calculated on a wet basis of 14% moisture content; and
- (c) yield not more than 0.6% of ash calculated on a wet basis of 14% moisture content.

(2) Flour may contain the following:

- (a) malted wheat flour;
- (b) malted barley flour in an amount not exceeding 0.75% of the weight of the flour;
- (c) harmless preparation of enzymes obtained from *Aspergillus oryzae*;
- (d) ascorbic acid as bread improver;
- (e) ammonium or potassium persulphate in an amount not exceeding 250 ppm (calculated by weight);
- (f) ammonium chloride in an amount not exceeding 0.2% (calculated by weight); and

(g) acid calcium phosphate [calculated as  $\text{CaH}_4(\text{PO}_4)_2$ ] in an amount not exceeding 0.7%.

(3) Flour shall not be artificially bleached except by oxidising changes brought about by means of an electrical process in which only ozone or oxides of nitrogen are produced, or by chlorine or chlorine dioxide, or by benzoyl peroxide. The residue of chlorine dioxide and benzoyl peroxide in the flour shall not exceed 50 ppm (calculated by weight).

(4) Flour intended for the manufacture of biscuit may contain sulphur dioxide not exceeding 200 ppm (calculated by weight).

(5) No flour, intended for sale as such, shall contain any emulsifier or stabiliser.

### **Wholemeal, whole wheat or entire wheat flour**

**40.**—(1) Wholemeal, whole wheat or entire wheat flour shall be the clean and sound, coarse or fine product obtained by grinding clean and sound wheat and it shall contain all the constituents of such wheat. It shall contain —

- (a) not more than 15% moisture;
- (b) not less than 8% protein (total nitrogen x 5.7) calculated on a wet basis of 14% moisture content; and
- (c) not less than 1.8% crude fibre calculated on a wet basis of 14% moisture content.

Mixtures of flour and bran shall not be deemed to be wholemeal flour.

(2) Wholemeal, whole wheat or entire wheat flour shall not contain any added substance other than those permitted in regulation 39(2).

### **Wholegrain**

**40A.**—(1) In these Regulations, “wholegrain” means the intact grain or the dehulled, ground, milled, cracked or flaked grain where the constituents (endosperm, germ and bran) are present in such proportions that represent the typical ratio of those constituents occurring in the whole cereal, and includes wholemeal.

(2) No food product shall be labelled as “wholegrain” or with words conveying that meaning unless —

- (a) the food product falls within or is made from ingredients falling within the definition of “wholegrain” in paragraph (1); and
- (b) the word “wholegrain” (or other words conveying that meaning) is qualified immediately by words indicating the percentage of wholegrain ingredients used.

*[S 195/2011 wef 15/04/2011]*

### **Vital gluten flour**

**41.** Vital gluten or gluten flour shall be the product obtained from white wheat flour by the removal of a large proportion of starch. It shall contain not more than 10% moisture and calculated on a moisture-free basis not less than 12.7% nitrogen, and shall not contain any added substance.

### **Self-raising flour**

**42.** Self-raising flour shall be the white wheat flour to which the ingredients of baking powder have been added. It shall liberate not less than 0.5% by weight of carbon dioxide when moistened and heated, and shall contain not more than 0.6% of sulphates, calculated as calcium sulphate. It shall not contain any other added substance.

### **Protein-increased flour**

**43.** Protein-increased flour shall conform in all respects with the general standard for white wheat flour, other than that of protein content. It shall contain not less than 2.5% nitrogen, calculated on a moisture-free basis, and may contain added gluten.

### **Corn flour**

**44.** Corn flour or cornstarch shall be the starch powder derived from any variety of corn. It shall not yield more than 0.8% of ash.



**Rice flour**

45. Rice flour or ground rice shall be the meal obtained by grinding husked rice. It shall not yield more than 1.5% ash and shall not contain any foreign substance other than dextrose or talc derived from polished rice.

**Tapioca flour**

46. Tapioca flour shall be the starch powder derived from the root of the cassava plant (*Manihot utilissima*). It shall not yield more than 0.2% ash.

**Bakery products**

47. In these Regulations, “bakery product” means any food for which a standard has been prescribed in regulations 48 to 52.

**Bread**

48. Bread shall be made by baking a yeast-leavened dough prepared with flour and water and may contain —

- (a) salt;
- (b) edible fats;
- (c) milk or milk products;
- (d) eggs;
- (e) sweeteners including permitted sweetening agents;

*[S 195/2011 wef 15/04/2011]*

- (f) malt syrup, malt extract or malt flour;
- (g) vinegar;
- (h) soya bean or other flours;
- (i) permitted emulsifiers and stabilisers;
- (j) permitted Class II chemical preservatives; and
- (k) permitted colouring matters.

**Wholemeal bread**

49. Wholemeal bread shall be bread made from wholemeal flour or a mixture of wholemeal flour and other flours. It shall contain not less than 0.6% fibre calculated on the dry matter of bread and shall not contain any colouring molasses or caramel.

**Fruit bread**

50. Fruit bread shall be bread obtained by baking a yeast-leavened dough prepared, with or without spices from —

- (a) flour and water;
- (b) wholemeal flour and water; or
- (c) a mixture of flour and wholemeal flour and water,

and shall contain raisins, currants, sultanas or dried fruit, in proportion of not less than 10 kg, singly or in the aggregate, to every 100 kg of flour or of wholemeal flour or of the mixture, as the case may be.

**Rye bread**

51. Rye bread shall be bread baked from a dough of rye flour to which may be added not more than 70% of flour.

**Milk bread**

52. Milk bread shall be bread that contains not less than 4% of non-fat milk solids on a moisture free basis.

**Labelling of bakery products**

53.—(1) No bakery product containing non-wheaten flour shall be labelled as bread unless it is labelled with a statement containing the names of the flour used in its preparation listed in descending order as proportions of the total flour used.

(2) No bakery product shall be labelled as wholemeal bread unless the words “wholemeal bread” is qualified immediately by words indicating the per cent of wholemeal flour used.

### **Flour confectionery**

**54.**—(1) Flour confectionery, including pastry, cakes and biscuits, shall be the product, cooked or uncooked, of a mixture of cereals and other foodstuffs, and shall exclude bakery products.

(2) Flour confectionery may contain permitted flavouring agents, permitted colouring matter and permitted preservatives.

(3) The coating of biscuits described as “chocolate” shall contain not less than 12% of water-free and fat-free residue of cocoa paste, or shall comply with the standard for chocolate prescribed in regulation 168.

### **Pasta**

**55.**—(1) In these Regulations, “pasta” means any product which is prepared by drying of extruded or moulded units of dough or by steaming of slitted dough with or without drying.

(2) Pasta shall comprise principally a cereal meal and may contain one or more of the following:

- (a) common salt;
- (b) eggs;
- (c) various kinds of starch;
- (d) edible fats and oils;
- (e) permitted flavouring agents and permitted colouring matters; and
- (f) any other foodstuffs.

### **Noodles**

(3) Noodles of various types, including products which are commonly known as “mee” (“mian”) and other “mee” products, except noodles which contain less than 20% moisture, shall be pasta which contains not less than 50% flour.

(4) Noodles which contain less than 20% moisture, including “spaghetti”, “macaroni” and the product commonly known as “mee sua” (“mian xian”) shall contain not less than 70% wheat flour.

**Rice noodles**

(5) Rice noodles, of various types, including products which are commonly known as “kuay teow” (“guo tiao”), “bee tai mak” (“mi shai mu”) and “hor fun” (“he fen”), except rice noodles which contain less than 20% moisture, shall be pasta which contains not less than 50% rice flour.

(6) Rice noodles which contain less than 20% moisture, including the product commonly known as “bee hoon” (“mi fen”), shall contain not less than 80% rice flour.

**Labelling of pasta**

56. No pasta shall be labelled with the word “egg”, or any word of similar meaning, unless that pasta contains not less than 4% egg solids calculated on a dry basis.

**AERATING INGREDIENTS****Cream of Tartar**

57. Cream of Tartar shall contain not less than 99% acid tartrates calculated as potassium hydrogen tartrate.

**Baking powder**

58.—(1) Baking powder means a salt or a mixture of salts, with or without a farinaceous diluent substance, which evolves carbon dioxide on being moistened or heated, and which may be used in the preparation of articles of food as a chemical leaven. It shall contain not more than 1.5% sulphates, calculated as calcium sulphate. It shall yield not less than 8% carbon dioxide on heating with water.

(2) Coloured baking powder or golden raising powder shall conform to the standards prescribed for baking powder except that it shall yield not less than 6% carbon dioxide on heating with water.

**MEAT AND MEAT PRODUCTS****Meat**

59. Meat means any edible part of the carcass of any animal or bird, healthy at the time of slaughter, which is ordinarily used as food by

man, whether fresh, or prepared by freezing, chilling, preserving, salting or by any other process.

### **Fresh, raw or chilled meat**

**60.** Fresh meat, raw meat, or chilled meat shall be meat that has been maintained in a wholesome condition without any part having been frozen.

### **Dressed Bird**

**60A.**—(1) No person shall import, sell or advertise for sale any dressed bird as fresh or chilled dressed bird unless it is labelled with the name of the service abattoir, the date of the slaughtering and, in the case of imported dressed bird, the country of origin.

(2) For the purposes of paragraph (1), any dressed bird for sale or advertised for sale which is not frozen shall be deemed to be fresh dressed bird unless otherwise labelled.

### **Frozen meat**

**61.** Frozen meat shall be meat which has been subjected to a freezing process specially designed to preserve the wholesomeness and quality of the product which is maintained in a wholesome condition at a temperature of  $-18^{\circ}\text{C}$  or below except during frozen storage defrosting cycles or during transfer from the delivery vehicle to the frozen meat store on frozen meat display unit. The temperature of frozen meat shall at no time exceed  $-12^{\circ}\text{C}$ .

*[S 195/2011 wef 15/04/2011]*

### **Corned, cured, pickled or salted meat**

**62.**—(1) Corned meat, cured meat, pickled meat or salted meat, including ham and bacon, is meat cooked or uncooked, which has been prepared by treatment with salt, sugar, vinegar, or spices, whether singly or in combination.

(2) Corned meat, cured meat, pickled meat or salted meat may contain soluble inorganic phosphates in proportion not exceeding the equivalent of 0.3% of phosphorus pentoxide,  $\text{P}_2\text{O}_5$ .

(3) Corned meat, cured meat, pickled meat or salted meat may contain sodium nitrite, potassium nitrite, sodium nitrate or potassium nitrate, alone or in combination, provided that the amount of nitrites and nitrates present in the final product do not exceed the permitted levels specified in Part I of the Fourth Schedule.

*[S 493/2013 wef 01/08/2013]*

### **Smoked meat**

**63.**—(1) Smoked meat is meat cooked or uncooked, which has been maintained in a wholesome condition and treated with salt and subjected to the action of smoke derived from wood that is free from paint or timber preservative or meat treated with natural smoke solutions, extracts and its identical synthetic equivalent.

(2) Smoked meat may contain sugar.

*[S 59/2019 wef 01/02/2019]*

(3) Smoked meat may contain potassium or sodium nitrite, potassium or sodium nitrate, alone or in combination, provided that the amount of nitrites and nitrates present in the final product do not exceed the permitted levels specified in Part I of the Fourth Schedule.

*[S 493/2013 wef 01/08/2013]*

### **Minced or chopped meat**

**64.**—(1) Minced meat or chopped meat shall be meat, whether fresh or chilled, which has been comminuted by mincing, chopping or cutting. It shall not contain any preservative, salt or other added substance.

(2) Minced beef shall contain not more than 30% fat and when the product is represented by any means whatsoever as being lean it shall contain not more than 15% fat.

### **Hamburgers or beefburgers and similar products**

**65.**—(1) Hamburgers or beefburgers shall be minced meat comprising a minimum of 90% meat, with or without the addition of cereal, flavouring substances, salt, spices, herbs, sugar, vinegar, sodium caseinate or other foodstuffs. Hamburgers or beefburgers

shall contain not less than 15% protein (total nitrogen x 6.25) combination and not more than 30% fat.

(2) Any prepacked minced meat other than beef which resembles hamburgers or beefburgers shall be labelled as follows:

*“(here state name of meat) burger”.*

It shall comply with the standards laid down for hamburgers or beefburgers.

(3) In these Regulations, “hamburgers”, “beefburgers” and other type of “meat burgers” do not include any separable bakery product or other separable food that may enclose or be enclosed with the minced meat product.

### **Sausage meat**

**66.**—(1) Sausage meat shall be chopped or comminuted meat. It may contain salt, sugar, spices, herbs and wholesome farinaceous substances.

(2) Sausage meat shall contain not more than 6% starch and in the case of pork sausage meat and beef sausage meat not less than 65% and 50% meat respectively, and not more than 40% of the meat content shall be fat.

(3) Sausage meat may contain potassium or sodium nitrite, potassium or sodium nitrate, alone or in combination, provided that the amount of nitrites and nitrates present in the final product does not exceed the permitted levels specified in Part I of the Fourth Schedule.

*[S 493/2013 wef 01/08/2013]*

### **Sausages**

**67.**—(1) Sausage shall include Chinese sausage and shall be sausage meat enclosed in a skin or casing. It may contain harmless *Lactobacillus* cultures and lactic acid starter culture, *Pediococcus cerevisiae*, with or without subsequent dipping in vinegar, smoking or cooking.

(2) *[Deleted by S 59/2019 wef 01/02/2019]*

**Meat extracts, meat essences and meat juices**

**68.**—(1) Meat extract, meat essence and meat juice are products obtained from meat extraction, whether concentrated or not, and shall contain the protein of flesh. Meat essence shall contain no extract of yeast or other added substances except salt and harmless herbal substances. Meat juice may contain glycerine if the presence and percentage of glycerine is declared on the label.

(2) Meat essence other than chicken essence shall contain not less than 3% (w/v) protein (total nitrogen x 6.25).

**Chicken essence and double strength chicken essence**

**69.** Chicken essence shall be meat essence and shall contain not less than 7% (w/v) protein (total nitrogen x 6.25). Any chicken essence which is claimed to be double strength shall contain a proportionately larger percentage of protein. Any chicken essence which is claimed to be concentrated shall contain not less than 9% (w/v) protein (total nitrogen x 6.25).

**Meat paste or pate**

**70.** Meat paste or pate, which includes meat spread, shall be a smooth readily spreadable product with a meat content of not less than 70% in the form of finely divided meat, and not less than 60% of the meat content shall be lean meat.

**FISH AND FISH PRODUCTS****Fish**

**71.** Fish shall be any edible and wholesome part of any marine or freshwater animal, other than a mammal, that is ordinarily used for human consumption, and shall include crustaceans and molluscs.

**Fresh or chilled fish**

**72.** Fresh or chilled fish shall be fish which has been maintained in a wholesome condition without any part having been frozen.



**Frozen fish**

73. Frozen fish shall be fish which has been subjected to a freezing process specially designed to preserve the wholesomeness and quality of the product and maintained in a wholesome condition at a temperature of -18°C or below except during frozen storage defrosting cycles or during transfer from the delivery vehicle to the frozen fish store on frozen fish display unit. The temperature of the frozen fish shall at no time exceed -12°C.

*[S 195/2011 wef 15/04/2011]*

**Smoked fish**

74. Smoked fish shall be fish which has been maintained in a wholesome condition and treated with salt and subjected to the action of smoke derived from wood that is free from paint or timber preservative or fish treated with natural smoke solutions, extracts and its identical synthetic equivalent. It may be coloured with annatto.

*[S 59/2019 wef 01/02/2019]*

**Salted fish**

75. Salted fish shall be fish which has been maintained in a wholesome condition and treated with salt. It may be dried and smoked or coloured with annatto.

**Fish paste**

76. Fish paste shall be a paste prepared from one or more kinds of fish, with or without other wholesome foodstuffs, condiments and permitted colouring matter. It shall contain not less than 70% fish.

**Fish cakes and fish balls**

77. Fish cakes including fish balls shall be prepared from one or more kinds of fish, with or without starch, condiments or permitted colouring matters. They shall contain not less than 40% fish.

## EDIBLE FATS AND OILS

**Edible fats and oils**

78.—(1) Edible fats and oils shall mean the fats and oils modified or not and commonly recognised as wholesome foodstuffs. Unless otherwise specified, the peroxide value of edible fats and oils shall not be more than 10 milliequivalents of peroxide oxygen per kg of fat or oil. They may contain permitted anti-oxidants and anti-foaming agents.

(2) Edible fats and oils shall be free from offensive odour and taste.

(2A) Edible fats and oils must not contain copper in excess of —

- (a) 0.1 ppm in the case of refined fats and oils;
- (b) 0.4 ppm in the case of virgin or cold-pressed fats and oils;  
and
- (c) 0.4 ppm in the case of lard, rendered pork fat, premier jus (oleo stock) and dripping (edible tallow).

[S 59/2019 wef 01/02/2019]

(3) [Deleted by S 424/2020 wef 01/06/2021]

(4) [Deleted by S 424/2020 wef 01/06/2021]

**Labelling of edible fats or oils**

79.—(1) No package containing edible fats or oils shall be labelled with the word “polyunsaturated”, or any word of similar meaning, unless the proportion of cis-methylene interrupted polyunsaturated fatty acids is more than 40% (w/w) of the total fat and the proportion of saturated fatty acids does not exceed 20% (w/w) of the total.

[S 175/2012 wef 02/05/2012]

(2) Every package of prepacked edible fats and oils for sale shall be labelled with a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General, specifying the energy value, the amounts of protein, carbohydrate, fat, trans fatty acids and the amount of any other nutrients for which a nutrition claim is made in respect of the food.

[S 175/2012 wef 02/05/2012]

**Coconut oil**

**80.** Coconut oil shall be oil obtained from the fruit of *Cocos nucifera* and shall have —

- (a) a specific gravity (30°C/20°C) of not less than 0.913 and not more than 0.918;
- (b) a refractive index (40°C) of not less than 1.448 and not more than 1.450;
- (c) an iodine value of not less than 7 and not more than 11;
- (d) a saponification value of not less than 250 and not more than 264;
- (e) a free fatty acid content, calculated as lauric acid, of not more than 0.1% (w/w) if the oil is refined and 3.5% (w/w) if the oil is not refined;
- (f) a Reichert-Meisel value of not less than 6 and not more than 8; and
- (g) a Polenske value of not less than 12 and not more than 18.

**Corn oil**

**81.** Corn oil (maize oil) shall be oil obtained from the germ of *Zea mays* and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.918 and not more than 0.924;
- (b) a refractive index (20°C) of not less than 1.473 and not more than 1.475;
- (c) an iodine value of not less than 103 and not more than 128; and
- (d) a saponification value of not less than 187 and not more than 193.

**Cottonseed oil**

**82.** Cottonseed oil shall be oil obtained from the seed of cultivated species of *Gossypium* and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.915 and not more than 0.928;
- (b) a refractive index (20°C) of not less than 1.472 and not more than 1.474;
- (c) an iodine value of not less than 100 and not more than 116; and
- (d) a saponification value of not less than 190 and not more than 198.

### Groundnut oil

**83.** Groundnut oil (peanut oil) shall be oil obtained from the seed of *Arachis hypogaea* and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.911 and not more than 0.920;
- (b) a refractive index (20°C) of not less than 1.468 and not more than 1.472;
- (c) an iodine value of not less than 84 and not more than 105;
- (d) a saponification value of not less than 188 and not more than 195; and
- (e) a free fatty acid content, calculated as oleic acid, of not more than 1% (w/w).

### Olive oil

**84.** Olive oil shall be oil obtained from the fruit of *Olea europaea* and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.910 and not more than 0.918;
- (b) a refractive index (20°C) of not less than 1.468 and not more than 1.471;
- (c) an iodine value of not less than 77 and not more than 94;
- (d) a saponification value of not less than 185 and not more than 195; and

- (e) a free fatty acid content, calculated as oleic acid, of not more than 1.5% (w/w).

### **Safflower oil**

**85.** Safflower oil (Carthamus oil or Kurdee oil) shall be oil obtained from the seed of safflower (*Carthamus tinctorius* L) and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.922 and not more than 0.927;
- (b) a refractive index (20°C) of not less than 1.472 and not more than 1.476;
- (c) an iodine value of not less than 135 and not more than 150; and
- (d) a saponification value of not less than 186 and not more than 198.

### **Sesame oil**

**86.** Sesame oil shall be oil obtained from the seed of *Sesamum indicum* and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.915 and not more than 0.924;

*[S 152/2017 wef 01/04/2017]*

- (b) a refractive index (20°C) of not less than 1.472 and not more than 1.476;
- (c) an iodine value of not less than 103 and not more than 116;
- (d) a saponification value of not less than 188 and not more than 195; and
- (e) a free fatty acid content, calculated as oleic acid, of not more than 3.5% (w/w).

### **Soya bean oil**

**87.** Soya bean oil shall be oil obtained from the seed of *Soja max* and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.921 and not more than 0.925;
- (b) a refractive index (20°C) of not less than 1.472 and not more than 1.476;
- (c) an iodine value of not less than 120 and not more than 141;
- (d) a saponification value of not less than 189 and not more than 195; and
- (e) a free fatty acid content, calculated as oleic acid, of not more than 0.1% (w/w).

### **Sunflower seed oil**

**88.** Sunflower seed oil shall be oil obtained from the seed of *Helianthus annuus* and shall have —

- (a) a specific gravity (20°C/20°C) of not less than 0.918 and not more than 0.923;
- (b) a refractive index (20°C) of not less than 1.474 and not more than 1.477;
- (c) an iodine value of not less than 118 and not more than 141; and

*[S 152/2017 wef 01/04/2017]*

- (d) a saponification value of not less than 185 and not more than 195.

### **Dripping**

**89.** Dripping (edible tallow) shall be the clean fat rendered from the fat or bones of sheep, ox or buffaloes and shall have —

- (a) a free fatty acid content, calculated as oleic acid, of not more than 2% (w/w);
- (b) not more than 1% (w/w) foreign matter, including salt, unavoidably incorporated in the course of rendering;
- (c) not more than 2% (w/w) water; and
- (d) a peroxide value of not more than 16 milliequivalents peroxide oxygen per kg fat.

**Lard**

**90.** Lard shall be the clean fat rendered from the meat of swine and shall have —

- (a) a free fatty acid content, calculated as oleic acid, of not more than 2% (w/w);
- (b) not more than 1% (w/w) foreign matter, including salt, unavoidably incorporated in the course of rendering; and
- (c) not more than 1% (w/w) water.

**Margarine**

**91.**—(1) Margarine shall be the food which is an emulsion of edible animal or vegetable fats or oils with water or milk products or both and is capable of being used for the same purposes as butter. Margarine shall contain not more than 16% (w/w) moisture and shall conform to the general standard as laid down in this Part for edible fats and oils. It shall contain no other substance except salt and permitted colouring matter, anti-oxidant, emulsifier, flavouring agent, chemical preservative and sequestrant.

*[S 195/2011 wef 15/04/2011]*

(2) Despite regulation 11(4), margarine or table margarine shall be margarine that has added vitamins and shall contain in each 1 kg —

- (a) vitamin A of an amount not less than 8.5 mg of retinol activity; and
- (b) vitamin D of an amount not less than 55 mcg of cholecalciferol.

*[S 152/2017 wef 01/04/2017]*

(3) Polyunsaturated margarine is table margarine which has not less than 40% cis-methylene interrupted polyunsaturated fatty acids and not more than 20% saturated fatty acids of the total fat present.

**Fat spread**

**91A.**—(1) Fat spread shall be table spread which is food in the form of a spreadable emulsion, principally of edible animal or vegetable fats or oils with water or milk products or both.

(2) Fat spread may contain permitted colouring matter, anti-oxidant, emulsifier, flavouring agent, chemical preservative and sequestrant.

*[S 195/2011 wef 15/04/2011]*

(3) Fat spread sold as special purpose food may, subject to compliance with regulation 250A, contain up to 8% (w/w) of added phytosterols or 14% (w/w) phytosterol esters.

*[S 195/2011 wef 15/04/2011]*

(4) Fat spread does not include margarine and butter.

### **Vanaspati**

**92.**—(1) Vanaspati shall be the refined edible vegetable oil whether or not it has been subjected to a process of modification in any form. It shall be prepared from groundnut oil, cotton seed oil or sesame oil or a mixture thereof or other harmless vegetable oil and shall have —

- (a) no colouring matter added to the modified oil;
- (b) not more than 2.5% (w/w) moisture;
- (c) not more than 1.25% (w/w) unsaponifiable matter;
- (d) not more than 0.25% (w/w) free fatty acids (calculated as oleic acid); and
- (e) a slip point of not less than 36°C and not more than 41°C.

(2) Vanaspati on melting, shall be clear in appearance and shall be pleasant to taste and smell and shall be free from staleness and rancidity.

(3) There shall be printed on the label attached to every package of food described as “Vanaspati” the words in English “Mixture of Vegetable Oils” or “Vegetable Cooking Oil”. Such words shall precede or immediately follow the word “Vanaspati” and shall be printed with letters of not less than 3 mm in height. No pictorial illustration or any statement suggesting or likely to suggest that the product is of animal origin shall appear on the label.



## MILK AND MILK PRODUCTS

**Milk**

**93.**—(1) Milk shall be the normal mammary secretion of cows, buffaloes, or goats without either addition thereto or extraction therefrom and shall contain —

- (a) not less than 8.5% (w/w) milk solids other than milk fat;
- (b) not less than 3.25% (w/w) milk fat; and
- (c) no added water, dried or condensed milk or any fluid reconstituted therefrom or any skimmed milk, colouring matter, or any other added substance.

*[S 49/2016 wef 02/02/2016]*

(2) A person must not import, sell or advertise raw milk intended for direct human consumption.

*[S 49/2016 wef 02/02/2016]*

(3) In this regulation, “raw milk” means milk that has not been —

- (a) heat-treated in accordance with regulation 94(1), 95(1) or 96(1); or
- (b) otherwise treated in a way acceptable to the Director-General that has an equivalent effect on the milk as if it were heat-treated in accordance with regulation 94(1), 95(1) or 96(1).

*[S 49/2016 wef 02/02/2016]*

**Pasteurised milk**

**94.**—(1) Pasteurised milk shall be milk which has been effectively heat-treated once only by heating the milk to a temperature of not less than —

- (a) 62.8°C and not more than 65.6°C and holding it at such temperature for not less than 30 minutes, and then immediately and rapidly reducing the temperature to 4.4°C or below; or

(b) 72°C and not more than 73.5°C and holding it at such temperature for at least 15 seconds, and then immediately and rapidly reducing the temperature to 4.4°C or below.

(2) Pasteurised milk after having been subjected to processing by heat as described in paragraph (1) shall immediately be packed aseptically.

(3) Every package of pasteurised milk shall be date-marked in accordance with regulation 10.

### **Ultra heat treated milk**

**95.**—(1) Ultra heat treated milk or U.H.T. milk shall be milk which has been subjected to heat treatment by being retained at a temperature of not less than 135°C for a minimum of two seconds and immediately aseptically packed in sterile containers.

(2) Every package of U.H.T. milk shall be date-marked in accordance with regulation 10.

### **Sterilised milk**

**96.**—(1) Sterilised milk shall be milk which has been filtered or clarified, homogenised and thereafter heated to and maintained at a temperature of not less than 100°C for a length of time sufficient to kill all the micro-organisms present and shall be packed in hermetically sealed containers.

(2) Every package of sterilised milk, except canned sterilised milk, shall be date-marked in accordance with regulation 10.

### **Homogenised milk**

**97.**—(1) Homogenised milk shall be milk which has been treated by heat and has been processed in such a manner as to break up the globules of butterfat and to cause them to remain uniformly distributed throughout the milk. It shall not contain any added substance other than permitted stabilisers.

(2) Every package of homogenised milk, except canned sterilised homogenised milk, shall be date-marked in accordance with regulation 10.

**Reconstituted or recombined milk**

**98.**—(1) Reconstituted or recombined milk shall be the product prepared from milk substances combined with water or milk or both water and milk. It shall not contain any added substance other than permitted stabilisers.

(2) Reconstituted or recombined milk shall contain —

(a) not less than 3.25% (w/w) milk fat; and

(b) not less than 8.5% (w/w) milk solids other than milk fat.

(3) Reconstituted or recombined milk shall be labelled as “reconstituted milk” or “recombined milk” and the word “reconstituted” or “recombined” shall be in letters at least as large as the letters of the word “milk”. Nothing in this paragraph shall prohibit the additional declaration “full cream” milk.

(4) Every package of reconstituted or recombined milk, except canned sterilised reconstituted or recombined milk, shall be date-marked in accordance with regulation 10.

**Evaporated milk**

**99.**—(1) Evaporated milk or unsweetened condensed milk shall be milk which has been concentrated by the removal of part of its water or milk which is made up of a mixture of milk substances and water or milk or both.

(2) Evaporated milk or unsweetened condensed milk shall contain —

(a) not less than 28% (w/w) total milk solids including milk fat; and

(b) not less than 8% (w/w) milk fat.

It may contain sodium, potassium and calcium salts of hydrochloric acid, citric acid, carbonic acid, orthophosphoric acid and phosphoric acid, vitamins and permitted stabilisers and shall not contain any other added substances.

**Sweetened condensed milk**

**100.** Sweetened condensed milk shall be milk which has been concentrated by the removal of part of its water, or milk which is made up of a mixture of milk substances and water or milk or both, and to which sugar has been added, and shall contain —

- (a) not less than 28% (w/w) total milk solids including milk fat;
- (b) not less than 8% (w/w) milk fat; and
- (c) no added substances other than any or any combination of the following:
  - (i) sodium hexametaphosphate, up to a level of 2000 ppm;
  - (ii) sugar; or
  - (iii) vitamins.

*[S 195/2011 wef 15/04/2011]*

**Dried milk or milk powder or dried whole milk or dried full cream milk or full cream milk powder**

**101.—**(1) Dried milk or milk powder or dried whole milk powder or dried full cream milk shall be the product resulting from the desiccation of milk and shall contain —

- (a) not less than 26% (w/w) milk fat;
- (b) not more than 5% (w/w) moisture; and
- (c) no added substances other than vitamins and one or more permitted emulsifiers.

(2) (a) Every tin or other receptacle containing dried milk or milk powder or dried whole milk or dried full cream milk or full cream milk powder shall bear a label on which shall be printed the following:

|   |
|---|
| <p>DRIED MILK (OR MILK POWDER OR<br/>DRIED WHOLE MILK OR DRIED FULL CREAM MILK<br/>OR FULL CREAM MILK POWDER)</p> |
|---|

This tin/receptacle contains the equivalent of  
..... litres of milk

(b) The labelling shall be completed by inserting the nearest number of litres in words and figures. The number of litres shall be such as to ensure that the equivalent quantity is accurately expressed in terms of milk containing not less than 3.25% (w/w) milk fat and 8.5% (w/w) non-fat milk solids.

(c) The labelling shall comply with regulation 109.

### **Dried half cream milk**

**102.**—(1) Dried half cream milk shall be the product, in powder or solid form, which remains after the removal from milk or cream of water and part of its fat and shall contain —

- (a) not less than 14% (w/w) milk fat;
- (b) not more than 5% (w/w) moisture; and
- (c) no added substances other than vitamins.

(2) (a) Every tin or other receptacle containing dried half cream milk shall bear a label on which shall be printed the following:

**DRIED HALF CREAM MILK**

This tin/receptacle contains the equivalent of  
..... litres of half cream milk

(b) The labelling shall be completed by inserting the nearest number of litres in words and figures. The number of litres shall be such as to ensure that the equivalent quantity is accurately expressed in terms of half cream milk containing not less than 1.6% (w/w) milk fat and 8.5% (w/w) non-fat milk solids.

(c) The labelling shall comply with regulation 109.

(d) Every tin or other receptacle containing dried half cream milk shall also be labelled with the words “GUARANTEED 14% BUTTER FAT”. It shall be printed in red in letters not less than 6 mm in height.

**Skimmed or separated milk or defatted milk**

**103.**—(1) Skimmed or separated milk or defatted milk shall be the product remaining after the removal from milk or cream of its fat, whether or not such substance is condensed, evaporated, concentrated, powdered, dried or desiccated and whether or not vitaminised, and includes buttermilk.

(2) Skimmed milk powder shall contain not more than 5% (w/w) moisture. An aqueous preparation of skimmed milk powder, whether or not vitaminised, when prepared according to the directions given on the label shall contain not less than 9% (w/w) non-fat milk solids.

(3) (a) Every tin or other receptacle containing skimmed milk powder shall bear a label on which shall be printed the following:

|   |
|---|
| <p>SKIMMED MILK POWDER</p> <p>UNFIT (or UNSUITABLE) FOR BABIES (or INFANTS)</p> <p>This tin/receptacle contains the equivalent of</p> <p>..... litres of skimmed milk</p> |
|---|

(b) The labelling shall be completed by inserting the nearest number of litres in words and figures. The number of litres shall be such as to ensure that the equivalent quantity is accurately expressed in terms of skimmed milk containing not less than 9% (w/w) non-fat milk solids.

(c) Every tin or other receptacle containing liquid skimmed milk shall bear a label upon which shall be printed the following:

|  |
|--|
| <p>SKIMMED MILK</p> <p>UNFIT (or UNSUITABLE) FOR BABIES (or INFANTS)</p> |
|--|

(d) The labelling in sub-paragraphs (a) and (c) shall comply with regulation 109.

(4) Every package of liquid skimmed milk, except canned sterilised skimmed milk, shall be date-marked in accordance with regulation 10.

**Filled milk**

**104.**—(1) Filled milk shall be any milk, cream or skimmed milk, whether or not condensed, concentrated, powdered, dried or desiccated to which has been added, or which has been blended or compounded with any fat or oil other than milk fat, so that the resulting product is an imitation or semblance of milk or milk products. It shall comply with the standards laid down with the exception of the origin of fat, for milk or the respective milk powder it resembles or imitates.

(2) (a) Every tin or other receptacle containing powdered filled milk shall bear a label on which shall be printed the following:

DRIED FILLED MILK  
UNFIT (or UNSUITABLE) FOR BABIES (or INFANTS)  
This tin/receptacle contains the equivalent of  
..... litres of filled milk

(b) The labelling shall be completed by inserting the nearest number of litres in words and figures. The number of litres shall be such as to ensure that the equivalent quantity is accurately expressed in terms of filled milk containing not less than 3.25% (w/w) fat and 8.5% (w/w) non-fat milk solids.

(c) Every tin or other receptacle containing filled liquid milk shall bear a label on which shall be printed the following:

FILLED MILK  
UNFIT (or UNSUITABLE) FOR BABIES (or INFANTS)

(d) The labelling in sub-paragraphs (a) and (c) shall comply with regulation 109.

(3) Every package of liquid filled milk, except canned sterilised liquid filled milk, shall be date-marked in accordance with regulation 10.

**Flavoured milk**

**105.**—(1) Flavoured milk shall be a liquid milk drink made from milk, milk powder, skimmed milk or skimmed milk powder, with flavouring substances.

*[S 195/2011 wef 15/04/2011]*

(1A) Flavoured milk may contain salt, sweeteners including permitted sweetening agents, permitted colouring matters and stabilisers and shall contain not less than 2% (w/w) milk fat.

*[S 195/2011 wef 15/04/2011]*

(2) Flavoured milk shall be labelled with the words “Flavoured Milk” which shall be immediately preceded or followed by the name of the flavour. The word “Flavoured” and the name of the flavour shall be in letters at least as large and of the same colour as the letters of the word “milk”.

(3) Every package of flavoured milk, except canned sterilised flavoured milk, shall be date-marked in accordance with regulation 10.

**Lactobacillus milk drink or cultured milk drink**

**106.**—(1) Lactobacillus milk drink or cultured milk drink shall be a fermented product made by inoculating pasteurised milk from which a portion of fat may have been removed and water may have been added with cultures of lactic acid producing bacteria. It may contain permitted colouring matters and flavouring agents.

(2) Lactobacillus milk drink or cultured milk drink shall contain not less than 3% (w/w) non-fat milk solids.

(3) Lactobacillus milk drink or cultured milk drink which is labelled as “Lactobacillus milk” or “cultured milk” shall comply with the standards laid down for milk in respect of milk solid and milk fat content.

(4) Every package of lactobacillus milk drink or cultured milk drink shall be date-marked in accordance with regulation 10.



**Malted milk powder**

**107.** Malted milk powder shall be the product made by combining milk with the liquid separated from a mash of ground barley malt and meal, with or without the addition of salt, sodium bicarbonate or potassium bicarbonate, in such a manner as to secure the free enzyme action of the malt extract, and by removing water, and shall contain —

- (a) not less than 7.5% (w/w) milk fat; and
- (b) not more than 3.5% (w/w) moisture.

It may contain permitted flavouring agents.

**Whey**

**108.** Whey shall be the substance remaining after the removal from milk, cream or skimmed milk of the curd in the process of cheese making, whether or not such substance is condensed, evaporated, concentrated, powdered, dried or desiccated.

**Labelling of milk**

**109.**—(1) The labelling required under regulations 101 (2), 102(2), 103(3) and 104(2) shall be printed in dark block type upon a light coloured background or in light block type upon a dark background.

(2) The type to be used for the labelling required under paragraph (1) stating the equivalent quantities of various types of milk shall not be less than 3 mm in height (or if the gross weight of the tin or receptacle does not exceed 330 g, 1.5 mm in height).

(3) The type to be used for the labelling required under paragraph (1), other than that stating the equivalent quantities of various types of milk, shall not be less than 6 mm in height (or if the gross weight of the tin or other receptacle does not exceed 330 g, 3 mm in height).

(4) The label shall be securely attached to the tin or other receptacle so as to be clearly visible.

(5) (a) The use of the word “milk” alone in any label shall be reserved exclusively for describing milk complying with the standards laid down for milk.

(b) Any built-up product shall be so labelled as to make it clear to the purchaser or consumer that the product is artificial and is not made solely from milk, and in no case shall the word “milk” be larger than any other word, descriptive of the product, on the label.

### **Cream**

**110.**—(1) Cream shall be that portion of milk in which the greater part of the milk fat has been concentrated. It shall contain not less than 35% (w/w) of milk fat and shall not contain any added substance.

(2) Every package of cream, except sterilised canned cream, shall be date-marked in accordance with regulation 10.

### **Homogenised cream**

**111.**—(1) Homogenised cream shall be cream which has been treated by heat, and has been processed in such a manner as to break up the globules of butterfat and cause them to remain uniformly distributed throughout the milk instead of rising to the surface. It shall not contain any added substance other than permitted emulsifiers and permitted stabilisers.

(2) Every package of homogenised cream, except sterilised homogenised canned cream, shall be date-marked in accordance with regulation 10.

### **Reconstituted or recombined cream**

**112.**—(1) Reconstituted or recombined cream shall be the product built up of milk substances with either water or milk or both. It shall not contain any added substance other than permitted emulsifiers and permitted stabilisers and it shall comply, as to the content of milk fat, with the standards laid down for cream.

(2) Reconstituted or recombined cream shall be labelled “Reconstituted Cream” or “Recombined Cream” and the words “Reconstituted” and “Recombined” shall be at least as large and of the same colour as the word “Cream”.

(3) Every package of reconstituted or recombined cream except canned sterilised reconstituted or recombined cream, shall be date-marked in accordance with regulation 10.

### **Thickened cream**

**113.**—(1) Thickened cream shall be cream which has been treated by heat, with or without the addition of sugar, permitted emulsifiers and permitted stabilisers, sucrate of lime or rennet and containing edible gelatine.

(2) Every package of thickened cream, except sterilised canned thickened cream, shall be date-marked in accordance with regulation 10.

### **Reduced cream**

**114.**—(1) Reduced cream shall be the product containing not less than 18% (w/w) milk fat but less than 35% (w/w) milk fat and shall comply with all other standards laid down for cream.

(2) Every package of reduced cream, except sterilised canned reduced cream, shall be date-marked in accordance with regulation 10.

### **Sour cream**

**115.**—(1) Sour cream is any cream which following pasteurisation has been intentionally soured by the use of lactic acid producing bacteria.

(2) Every package of sour cream shall be date-marked in accordance with regulation 10.

### **Butter**

**116.**—(1) Butter is a fatty product that is derived exclusively from milk, products obtained from milk, or both, and is principally in the form of an emulsion of the type water-in-oil.

(2) Butter must contain —

- (a) not less than 80% (w/w) milk fat;
- (b) not more than 16% (w/w) water; and

- (c) not more than 2% non-fat milk solids.
- (3) Butter may not contain any added substance except —
  - (a) harmless vegetable colouring matter;
  - (b) salt;
  - (c) starter cultures of harmless lactic acid producing bacteria, flavour producing bacteria, or both;
  - (d) water; or
  - (e) any substance expressly permitted in butter under these Regulations.

[S 704/2020 wef 31/08/2020]

## **Cheese**

**117.**—(1) Cheese shall be the solid or semi-solid product obtained by coagulating the casein of milk, skimmed milk, cream or any mixture of these with rennet, pepsin or acid. It may contain ripening ferments, harmless acid-producing bacterial cultures, special mould cultures, seasoning, lysozyme or permitted flavouring agent, anti-caking agent, colouring matter or chemical preservative. It shall not contain any fat other than milk fat.

[S 195/2011 wef 15/04/2011]

(2) Natamycin may be applied to the rind of a cheese by dipping or by spraying such that the proportion of natamycin in a sample taken from the surface to a depth of less than 5 mm, is not greater than 1 mg/sq dm.

(3) Natamycin should not be detected at a depth of 5 mm or more and should not be used together with sorbic acid.

## **Cheddar cheese**

**118.** Cheddar cheese shall contain not less than 48% (w/w) milk fat in water-free substance and not more than 39% (w/w) water.

**Unnamed cheese**

**119.** Cheese sold without any name or classification shall contain not less than 48% (w/w) milk fat in water-free substance and not more than 39% (w/w) water.

**Cream cheese**

**120.** Cream cheese shall be cheese made from cream or from milk to which cream has been added, and shall contain —

- (a) not more than 55% (w/w) moisture; and
- (b) not less than 65% (w/w) milk fat on the dry basis.

**Processed or emulsified cheese**

**121.** Processed or emulsified cheese shall be cheese which has been comminuted, emulsified and pasteurised. It shall contain —

- (a) not more than 45% (w/w) moisture;
- (b) not less than 45% (w/w) milk fat on the dry basis; and
- (c) not more than 3% (w/w) added anhydrous emulsifying salts.

**Cheese spread or cheese paste**

**122.** Cheese spread or cheese paste shall be a pasteurised spreadable cheese, and shall conform to the standards prescribed for processed or emulsified cheese, except that the moisture content shall not be more than 60% (w/w).

**Yoghurt**

**123.—**(1) Yoghurt shall be a fermented product made by inoculating pasteurised milk from which a portion of the fat may have been removed before pasteurisation or to which dried milk or dried non-fat milk solids have been added before pasteurisation, with cultures of *Lactobacillus bulgaricus* and one or more of the following bacteria, namely, *Streptococcus thermophilus*, *Lactobacillus acidophilus* and *Bacterium yoghurtii*.

(2) *Lactobacillus bulgaricus* and one or more of such other bacteria referred to in paragraph (1) shall predominate substantially in the product.

(3) Yoghurt may contain sugar and permitted colouring matter and flavouring agent. Yoghurt includes low-fat yoghurt, fat-reduced yoghurt, non-fat yoghurt and skimmed milk yoghurt.

(4) Yoghurt shall contain not less than 8.5% (w/w) milk solids other than milk fat.

(5) Yoghurt other than low-fat yoghurt, fat-reduced yoghurt, skimmed milk yoghurt and non-fat yoghurt shall contain not less than 3.25% (w/w) milk fat.

(6) Low-fat yoghurt or fat-reduced yoghurt shall contain not more than 2% (w/w) milk fat.

(7) Non-fat yoghurt or skimmed milk yoghurt shall contain not more than 0.5% (w/w) milk fat.

(8) Every package of yoghurt shall be date-marked in accordance with regulation 10.

### **Fruit yoghurt**

**124.**—(1) Fruit yoghurt shall be yoghurt blended together with fruit, fruit pulp, sliced fruit or fruit juice, with or without sugar, permitted preservatives or permitted colouring matter.

(2) Fruit yoghurt shall contain not less than 8.5% (w/w) milk solids other than fat and not less than 1% (w/w) milk fat and not less than 5% (w/w) fruit or fruit juice.

(3) Every package of fruit yoghurt shall be date-marked in accordance with regulation 10.

### **Ghee or ghi**

**125.**—(1) Ghee or ghi shall be the pure clarified fat obtained by the removal of water and non-fat solids from butter or cream. It shall conform with the following standards:

(a) not more than 0.3% (w/w) moisture;

- (b) not more than 3% (w/w) free fatty acid calculated as oleic acid;
- (c) a Reichert value of not less than 23.5%;
- (d) a Polenske value between 1.5-4; and
- (e) a butyro number between 42-45 (at 40°C).

(2) Ghee shall not contain any added substances other than the following:

- (a) citric acid; or
- (b) permitted anti-oxidants of a description and in the proportions specified in the Third Schedule.

*[S 195/2011 wef 15/04/2011]*

(3) The word “ghee” or “ghi” either by itself or in combination with other words shall not be used on any label as a description of any article other than ghee or ghi as defined in paragraph (1).

## ICE-CREAM, FROZEN CONFECTIONS AND RELATED PRODUCTS

### Ice-cream

**126.** Ice-cream shall be the frozen preparation of milk or cream or milk products in which part or the whole of milk fat may have been replaced by other edible fat or oil with or without the addition of sugar. It shall contain not less than 5% (w/w) fat and not less than 7.5% (w/w) non-fat milk solids.

### Dairy ice-cream

**127.** Dairy ice-cream or full cream-ice or dairy cream-ice shall be the frozen preparation of milk or cream or milk products with or without the addition of sugar. It shall contain not less than 10% (w/w) milk fat and not less than 7.5% (w/w) non-fat milk solids.

### Milk-ice

**128.** Milk-ice shall be the frozen food containing not less than 2.5% (w/w) milk fat and not less than 7% (w/w) non-fat milk solids.

**Frozen confections**

**129.**—(1) Frozen confections shall be the frozen preparation of water and one or more wholesome foods including non-fat milk solids, fruit pulp, fruit juice, nuts or beans, with or without the addition of sugar, permitted flavouring agents, permitted colouring matters and permitted stabilisers.

(2) Frozen confections include water ices, iced sherbet and ice lollies.

**SAUCE, VINEGAR AND RELISHES****Sauce**

**130.** Sauce other than those otherwise specified shall be a liquid or semi-liquid savoury product prepared from foodstuffs with or without spices.

**Soya bean sauce**

**131.**—(1) Soya bean sauce shall be a clear, salty, brown liquid made from sound soya beans with or without other wholesome foodstuffs, by either enzymic reaction or acid hydrolysis or by both methods.

(2) Soya bean sauce must be palatable and free from any offensive odour or any mould, except harmless strains of *Aspergillus* belonging to the *flavus-oryzae* group.

(3) Soya bean sauce may contain sugar, caramel and permitted chemical preservative. The total nitrogen content shall not be less than 0.6% (w/v).

**Oyster sauce**

**132.** Oyster sauce shall be the product made from oyster extract, salt, edible starch, with or without the addition of vinegar, citric acid, tartaric acid, monosodium glutamate, permitted preservatives and colouring matters. It shall contain not less than 2.5% (w/w) protein (total nitrogen x 6.25).



**Tomato sauce**

**133.** Tomato sauce, ketchup, catsup and relish shall conform with the following standards:

- (a) it shall contain not less than 4% (w/w) tomato solids derived from clean and wholesome tomatoes;
- (b) it shall be strained, with or without heating, so as to exclude seeds or other coarse or hard substances;
- (c) it shall contain no fruit or vegetable other than tomato except onion, garlic, spices and condiments added for flavouring purposes; and
- (d) it may contain salt, sugar and vinegar and shall not contain any added colouring matter.

**Chilli sauce**

**134.** Chilli sauce or chilli paste shall be the product made from sound ripe chillies. It may contain spices, salt, garlic, edible starch, tomatoes, onion, sugar, vinegar or acetic acid and shall contain no other substance except permitted chemical preservatives, colouring matters, stabilisers and flavour enhancers.

**Vinegar**

**135.—**(1) Vinegar shall be the liquid produced by either or both alcoholic and acetous fermentation of one or more of the following:

malt, spirit, wine, cider, alcoholic liquors, fruit, honey, dextrose and sugar (including unrefined crystal sugar and refined syrups or molasses).

(2) Every variety of vinegar shall contain —

- (a) not less than 4 g of acetic acid in 100 ml; and
- (b) no mineral acid or any other added substance or colouring matter except caramel.

(3) Every package containing vinegar shall be labelled in accordance with regulation 139.

**Distilled vinegar**

**136.**—(1) Distilled vinegar shall be the liquid produced by the distillation of vinegar.

(2) Every package containing distilled vinegar shall be labelled in accordance with regulation 139.

**Blended vinegar**

**137.**—(1) Blended vinegar shall be the liquid produced by mixing vinegar with distilled vinegar. It shall contain not less than 50% vinegar.

(2) Every package containing blended vinegar shall be labelled in accordance with regulation 139.

**Artificial or imitation vinegar**

**138.**—(1) Artificial or imitation vinegar shall be a mixture of water and acetic acid with or without flavouring essences.

(2) Artificial or imitation vinegar shall contain —

(a) not less than 4 g acetic acid and not more than 12.5 g acetic acid in 100 ml; and

(b) no mineral acid or any other substance or colouring matter except caramel and permitted flavouring agents.

(3) Every package containing artificial or imitation vinegar shall be labelled in accordance with regulation 139.

**Labelling of vinegar**

**139.**—(1) There shall be legibly printed in English on the label on or attached to every package which contains vinegar, the word “Vinegar” accompanied by a statement of the material from which the vinegar was brewed.

(2) There shall be written on the label on or attached to every package containing artificial or imitation vinegar the words “IMITATION VINEGAR” in capital letters so as to be clearly visible to the purchaser. Such capital letters shall not be less than 12 mm in height.

**Salad dressing**

**140.**—(1) Salad dressing shall be a mixture of either vegetable or milk fat with vinegar or citrus fruit juice or both with or without other foodstuffs, permitted chemical preservatives, colouring matters, flavouring agents, emulsifiers and sequestrants.

*[S 493/2013 wef 01/08/2013]*

(2) Salad dressing described as mayonnaise shall be a product that contains not less than 30% (w/w) of vegetable oil, and in which the sole emulsifier is egg yolk or whole egg.

**Pickles**

**141.** Pickles shall be sound vegetables or fruits or both, preserved in salt, vinegar or acetic acid, lactic acid, malic acid or tartaric acid, or admixture of any one of those substances, with or without the addition of —

- (a) sugar or dextrose;
- (b) spices and condiments;

*[S 195/2011 wef 15/04/2011]*

- (c) permitted chemical preservatives and colouring matter; and

*[S 195/2011 wef 15/04/2011]*

- (d) aluminium potassium sulphate as a firming agent in an amount not exceeding 200 ppm.

*[S 195/2011 wef 15/04/2011]*

**Chutney**

**142.** Chutney shall be a preparation made from sound fruits or vegetables, or both, with spices, salt, onion, garlic, sugar, vinegar, or acetic acid, and shall contain not less than 50% (w/w) total soluble solids.

## SUGAR AND SUGAR PRODUCTS

### Sugar

**143.** Sugar shall be the food chemically known as sucrose, and if sold as granulated, loaf cut, cube, milled or powdered shall contain not less than 99.5% (w/w) sucrose.

### Refined soft brown sugar

**144.** Refined soft brown sugar shall contain not less than 96% (w/w) total sugar (sucrose and reducing sugar) in which the reducing sugar shall not be more than 4% (w/w). It shall have passed through a refining process.

### Icing sugar or icing mixture

**145.** Icing sugar or icing mixture shall be powdered sugar, with or without added permitted colouring matter, and shall contain not more than 5% (w/w) starch.

### Molasses

**146.** Molasses shall be —

- (a) the mother liquor obtained by evaporating juice of sugar-cane until a large proportion of sugar has been separated by crystallisation; or
- (b) the syrupy food obtained by evaporation and partial inversion of the juice of sugar-cane which juice may or may not be clarified with or without the addition of sulphurous acid, and shall contain not more than 25% (w/w) moisture and 12% (w/w) sulphated ash.

### Table molasses

**147.** Table molasses shall be molasses which contain less than 3% (w/w) sulphated ash.

### Dextrose anhydrous

**148.** Dextrose anhydrous shall be purified and crystallised D-glucose without water of crystallisation. It shall contain not less than

99.5% (w/w) D-glucose on a dry basis and the total solids content shall not be less than 98% (w/w).

### **Dextrose monohydrate**

**149.** Dextrose monohydrate shall be purified and crystallised D-glucose containing one molecule of water of crystallisation. It shall contain not less than 99.5% (w/w) D-glucose on a dry basis and the total solids content shall not be less than 90% on a dry basis.

### **Glucose syrup**

**150.** Glucose syrup shall be the thick, syrupy, nearly colourless food made by incomplete hydrolysis of starch or of a starch containing substance, and shall not contain —

- (a) more than 25% (w/w) moisture;
- (b) more than 1% (w/w) ash; and
- (c) less than 35% (w/w) reducing sugars, calculated as dextrose on a moisture-free basis,

and may contain sulphur dioxide as provided under regulation 19.

### **Honey**

**151.** Honey shall be derived entirely from the nectar of flowers and other sweet exudation of plants by the work of bees, and shall contain not more than —

- (a) 20% (w/w) moisture;
- (b) 8% (w/w) sucrose; and
- (c) 0.75% (w/w) ash,

and shall contain not less than 60% (w/w) reducing sugars, expressed as invert sugar. It shall not contain any added sweetening agent, colouring matter or any other foreign substance.

*[S 195/2011 wef 15/04/2011]*

**Royal jelly**

**151A.**—(1) Royal jelly shall be the milky white viscous secretion from the salivary glands of honey bees and shall contain not less than 10 g of 10-hydroxy-decenoic acid per kg of royal jelly.

(2) Every label on or attached to a package or other receptacle containing royal jelly, or a food containing royal jelly, shall include, immediately after the common name, the following words or any other words to the same effect:

“WARNING — THIS PRODUCT MAY NOT BE SUITABLE FOR ASTHMA AND ALLERGY SUFFERERS.”.

**Sugar confectionery**

**152.**—(1) “Sugar confectionery” means any solid or semi-solid product complete in itself, and suitable for direct consumption without further preparation or processing, of which the characteristic ingredient is carbohydrate sweetening matter with or without the addition of edible fat, dairy product, gelatin, edible gums, nuts or preserved fruit, and includes sweetened liquorice and chewing gum, but does not include chocolate confectionery, sugared flour confectionery, any kind of ice-cream, ice lollies, table jellies, table jelly preparations, soft drink crystals, soft drink preparations, slab meringues or pharmaceutical products.

(2) Sugar confectionery shall not contain residues of mineral hydrocarbon exceeding the permitted levels specified in regulation 36.

**TEA, COFFEE AND COCOA****Tea**

**153.**—(1) “Tea” shall be the leaves and leaf-buds of any of the varieties of *Camellia sinensis*, prepared by the usual trade processes.

(2) Tea shall yield not more than 7% (w/w) or less than 4% (w/w) ash, of which at least one-half shall be soluble in water. It shall yield at least 30% (w/w) of water soluble extract. It shall not contain spurious, exhausted, decayed, mouldy leaves or stalks, or any matter for facing, colouring or for any other purpose.

**Tea dust, tea siftings and tea fannings**

**154.** Tea dust, tea siftings and tea fannings shall be respectively the dust, siftings and fannings of tea that conform to the standard prescribed for tea except that they shall yield not more than 5% (w/w) ash insoluble in hydrochloric acid.

**Instant tea**

**155.**—(1) Instant tea shall be prepared from wholesome leaves of any of the varieties of *Camellia sinesis* and shall be in the form of free-flowing powder.

(2) Instant tea shall contain —

- (a) not more than 15% (w/w) total ash;
- (b) not more than 6% (w/w) moisture;
- (c) not less than 4% (w/w) caffeine;
- (d) not less than 7% (w/w) tannin; and
- (e) no added colouring matter.

(3) Instant tea shall dissolve in boiling water in 30 seconds with moderate stirring and the infusion shall have the colour, taste and flavour of freshly brewed tea.

**Brewed tea**

**156.** Brewed tea is a beverage prepared from tea, tea dust, tea siftings, tea fannings or instant tea, with or without the addition of sugar or milk and shall contain no added colouring matter.

**Coffee**

**157.** “Coffee” shall be the seed or ground seed of one or more of the various species of *Coffea*.

**Coffee and chicory**

**158.**—(1) Coffee and chicory shall be a mixture of ground coffee and ground chicory. It shall contain not less than 50% (w/w) coffee and shall not contain any foreign substance.

(2) There shall be legibly printed in English on the label on or attached to every package which contains coffee mixed with chicory a statement in which the words “Coffee and Chicory” are printed in larger letters than any other words on the label, immediately followed by a statement of the percentage proportion in which the ingredients of the mixture are present, printed in type of not less than 3 mm in height, in the following form:

“Containing not less than (*here insert the number of parts per cent of coffee*) parts per cent of coffee”.

(3) The word “coffee” and expressions which include the word “coffee” shall not be printed on any statement or label printed on or attached to any package which contains a mixture of coffee and chicory unless it be conjoined with the words “and chicory”.

### **Coffee mixture**

**159.**—(1) Coffee mixture shall be ground coffee mixed with other ground food substances. Such mixtures shall contain not less than 50% (w/w) coffee and shall not contain any harmful substance.

(2) There shall be legibly printed in English on the label on or attached to every package which contains any mixture of coffee and substances other than chicory, a statement in which the words “Coffee Mixture” are printed, in larger letters than any other words on the label, immediately followed by a statement of the ingredients of the mixture and of the proportion in which the ingredients of the mixture are present, printed in type of not less than 3 mm in height in the following form:

“Containing (*here insert the number of parts per cent of coffee*) parts per cent of coffee mixed with (*here insert the number of parts per cent of other ingredients*) parts per cent of (*here insert the names of such other ingredients*)”.

(3) The word “coffee” and expressions which include the word “coffee” shall not be printed on any statement or label printed on or attached to any package which contains a mixture of coffee with substances other than chicory unless it be conjoined with the word “mixture”.



(4) Where any coffee mixture is sold otherwise than prepacked, there shall be legibly written or printed in English on a label, conspicuously attached, so as to be clearly visible to the purchaser, to every container or vessel in which the coffee mixture is stored immediately prior to sale, a statement in which the words “Coffee Mixture” are written in larger letters than any other words on the label, immediately followed by a statement of the ingredients of the mixture which complies with the requirements of paragraphs (2) and (3).

### **Instant coffee or soluble coffee**

**160.**—(1) Instant coffee or soluble coffee shall be the dried soluble solid obtained from a water extraction of coffee and shall be in the form of a free-flowing powder having the colour, taste and flavour characteristic of coffee.

(2) Instant coffee or soluble coffee shall be free from impurities and shall not contain chicory or any other added substances.

(3) Instant coffee or soluble coffee shall contain not more than 5% (w/w) moisture and not more than 12% (w/w) total ash, and not less than 2.25% (w/w) anhydrous caffeine on the moisture-free basis. It shall dissolve in boiling water in 30 seconds with moderate stirring.

### **Instant coffee and chicory or soluble coffee and chicory**

**161.**—(1) Instant coffee and chicory or soluble coffee and chicory shall be the dried soluble solid obtained from a water extraction of coffee and chicory of which not less than 50% shall be coffee. It shall contain not less than 0.5% (w/w) anhydrous caffeine on a moisture-free basis. It shall comply with the labelling requirements laid down for coffee and chicory in regulation 158.

(2) There shall be legibly printed in English on the label on or attached to every package which contains instant coffee and chicory or soluble coffee and chicory a statement in which the words “Instant Coffee and Chicory” or “Soluble Coffee and Chicory” are printed in larger letters than any other words on the label.

(3) The words “instant coffee” or “soluble coffee” and expressions which include the words “instant coffee” or “soluble coffee” shall not

be printed on any statement or label printed on or attached to any package which contains a mixture of instant coffee and chicory or soluble coffee and chicory unless the words are conjoined with the words “and chicory”.

### **Decaffeinated coffee**

**162.**—(1) Decaffeinated coffee shall be coffee which contains not more than 0.1% (w/w) anhydrous caffeine. It shall contain no ingredient other than those normally present in coffee.

(2) Decaffeinated instant coffee or decaffeinated soluble coffee shall be instant coffee or soluble coffee that contains not more than 0.3% (w/w) anhydrous caffeine based on the moisture-free basis.

### **Cocoa beans**

**163.** Cocoa beans (cacao beans) shall be the seeds of *Theobroma cacao* L. or other closely related species.

### **Cocoa nibs**

**164.** Cocoa nibs (cacao nibs, cracked cocoa) shall be prepared by heating and cracking cleaned, dried or cured cacao beans and removing the shell therefrom.

### **Cocoa paste, cocoa mass or cocoa slab**

**165.** Cocoa paste, cocoa mass or cocoa slab shall be the solid or semi-solid mass produced by grinding cocoa nibs. It shall not contain any foreign fat or oil.

### **Cocoa, cocoa powder or powdered cocoa**

**166.** Cocoa, cocoa powder or powdered cocoa shall be the powdered cocoa paste, deprived or not of a portion of its fat. It shall not contain any foreign fat or oil.

### **Cocoa essence or soluble cocoa**

**167.**—(1) Cocoa essence or soluble cocoa shall be the product obtained by treating cocoa paste deprived or not of a portion of its fat with alkali or alkaline salt.

(2) Cocoa essence or soluble cocoa shall not contain more than 3% (w/w) added alkali or alkaline salt, estimated as potassium carbonate, and shall not contain any foreign fat or oil.

## Chocolate

**168.**—(1) Chocolate (chocolate paste, confectioner's chocolate, chocolate coating or chocolate powder) shall be a preparation of cocoa paste, cocoa powder or cocoa, with or without the addition of —

(a) cocoa fat;

(b) sugar;

(c) spices;

(d) milk solids;

(e) permitted emulsifier;

(f) permitted flavouring agent;

(g) [*Deleted by S 152/2017 wef 01/04/2017*]

(ga) ammonium phosphatides in an amount not exceeding 10,000 ppm; and

*[S 195/2011 wef 15/04/2011]*

(h) up to 5% of vegetable fat (excluding cocoa fat).

(2) No person shall sell any chocolate containing vegetable fat (excluding cocoa fat) unless the package bears a label on which is printed a statement indicating the presence of such vegetable fat.

## Milk chocolate

**169.**—(1) Milk chocolate shall be chocolate containing milk solids. It shall contain, calculated on the dry matter, not less than 2% (w/w) milk fat and not less than 10.5% (w/w) fat-free milk solids.

(2) Any milk chocolate described as rich full cream or dairy milk chocolate shall contain, calculated on the dry matter, not less than 4.5% (w/w) milk fat and not less than 10.5% (w/w) fat-free milk solids.

### **Chocolate confectionery**

**170.**—(1) Chocolate confectionery shall be any solid or semi-solid product complete in itself and suitable for direct consumption without further preparation or processing, of which the characteristic ingredient is chocolate or cocoa, with or without the addition of nuts or fruits and includes products made by encrusting sugar confectionery and other ingredients in chocolate but does not include chocolate, chocolate-coated, filled or flavoured biscuits, any type of ice-cream or pharmaceutical products.

(2) The chocolate portion of any chocolate confectionery shall comply with the standards laid down for chocolate in these Regulations.

## FRUIT JUICES AND FRUIT CORDIALS

### **Fruit juices**

**171.**—(1) Fruit juice shall be the unfermented liquid extracted from sound, ripe, fresh fruit, with or without sugar, dextrose, invert sugar, liquid glucose, permitted colouring matter, chemical preservatives and ascorbic acid.

(2) Fruit juice which is made by the dilution of concentrated fruit juice shall be fruit juice made by the addition of water to concentrated fruit juice by an amount which is equal to the volume of water originally removed from fruit juice in the making of concentrated fruit juice.

(3) Fruit juice which is made by the dilution of concentrated fruit juice shall be so indicated on the label in letters not less than 3 mm in height.

### **Concentrated fruit juice**

**172.** Concentrated fruit juice shall be fruit juice which has been reduced by the removal of water to a volume not exceeding 50% of its original volume with or without the addition of ascorbic acid and permitted colouring matter.

## **Nectar**

**173.**—(1) Nectar shall be the unfermented pulpy fruit product, intended for direct consumption, obtained by blending the total edible part of a sound and ripe fruit whether concentrated or not, with one or more of the following, namely, water, sugar, dextrose, invert sugar, liquid glucose, permitted colouring matter, citric acid, malic acid and tartaric acid.

(2) Nectar may contain ascorbic acid either as an anti-oxidant or as a vitamin, and shall contain no substance other than those mentioned in this regulation.

(3) The percentage by weight of fruit ingredient in the form of puree, pulp, juice or concentrate in nectar shall be not less than —

- (a) 50% in the case of citrus fruit nectar;
- (b) 40% in the case of peach and pear nectars;
- (c) 35% in the case of apricot nectar;
- (d) 25% in other nectars.

## **Fruit juice cordials, squashes or syrups**

**174.** Fruit juice cordials, squashes or syrups shall be composed of the juices of sound fruits, water and sugar, with or without the addition of ascorbic acid, malic acid, citric acid, tartaric acid, permitted emulsifier or stabiliser, flavouring agent, colouring matter or chemical preservative. They shall contain not less than 15% fruit juice and not less than 25% sugar. They may contain glycerine up to and not exceeding a proportion of 10%. They shall contain no other added substance.

## **Fruit drinks or fruit crushes**

**175.** Fruit drink or fruit crush shall be the drink for consumption without dilution and shall contain fruit juice.

## JAMS

### Jams

**176.**—(1) Jam, conserve or preserve shall be the product made by processing fresh, canned or dried fruit or fruit pulp, by boiling to a suitable consistency with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination, with or without citric, malic or tartaric acid, permitted chemical preservative or colouring matter, pectin in the form of fruit juice or pulp or powder, the sodium, potassium or calcium salts of citric, malic and tartaric acids, together with sodium hydroxide and sodium bicarbonate.

(2) Jam, conserve or preserve shall contain not less than 35% (w/w) of the fruits from which it is purported to be made.

### Fruit jelly

**177.** Fruit jelly shall be jam made from pulped fruit that has been strained.

### Marmalade

**178.** Marmalade shall be the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling to a suitable consistency with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination, with or without citric, malic or tartaric acid, lemon or lime juice, pectin in the form of fruit juice or pulp or powder, permitted chemical preservatives or colouring matters, the sodium, potassium or calcium salts of citric, malic and tartaric acids, together with sodium hydroxide and sodium bicarbonate.

### Kaya or egg jam

**179.** Kaya or egg jam shall be the product made from egg, sugar, coconut milk (extract of coconut), flavouring, with or without the addition of permitted emulsifier and colouring matter. It shall contain not less than 3% (w/w) protein (total nitrogen x 6.25) on a dry basis and shall contain not more than 38% (w/w) moisture. It shall contain no added Class II preservatives.

## NON-ALCOHOLIC DRINKS

**Flavoured cordials or syrups**

**180.**—(1) Flavoured cordial or syrup shall be composed of water and sugar, with or without the addition of fruit juice, ascorbic acid, permitted emulsifiers and stabilisers, colouring matters, flavouring agents and chemical preservatives. They shall contain not less than 25% (w/v) sugar. They may contain glycerine up to and not exceeding a proportion of 10% (w/v). They shall contain no other added substance.

(2) Any flavoured cordial or syrup shall be labelled in one of the following manners:

- (a) (*Name of fruit, vegetable or flower*) flavoured syrup;
- (b) (*Name of fruit, vegetable or flower*) flavoured cordial; or
- (c) Imitation (*Name of fruit, vegetable or flower*) cordial.

**Soya bean milk**

**181.**—(1) Soya bean milk shall be a liquid food made by extraction from sound soya beans.

(2) Soya bean milk may contain sugar and harmless botanical substances and shall contain no other substance except sodium carbonate (as acidity regulator) and permitted stabilisers, emulsifiers and chemical preservatives.

*[S 195/2011 wef 15/04/2011]*

(3) The protein content of soya bean milk (total nitrogen x 6.25) shall not be less than 2% (w/v).

**Flavoured soya bean milk**

**182.** Flavoured soya bean milk shall be soya bean milk with added permitted flavouring agents and shall comply with the standards laid down for soya bean milk in respect of protein. It may contain permitted colouring matter.

**Soft drinks**

**183.**—(1) Soft drink shall be any substance in liquid or solid form intended for sale as drink for human consumption, either without or after dilution, and includes —

- (a) fruit juice cordial, squash or syrup;
- (b) flavoured cordial, squash or syrup;
- (c) any flavoured drink ready for consumption without dilution;
- (d) soda water, Indian or quinine tonic water, and any carbonated water whether flavoured or unflavoured;
- (e) ginger beer and any beverage made from any harmless herbal or botanical substance;
- (f) soya bean milk and soya bean milk drink; and
- (g) fruit drink or fruit crush.

(2) Soft drink does not include —

- (a) water (except as aforesaid);
- (b) water from natural springs, whether in its natural state or with added mineral substances;
- (c) tea, coffee, cocoa or chocolate, or any preparation of tea, coffee, cocoa or chocolate;
- (d) any egg product;
- (e) any cereal product, except flavoured barley water and cereal products containing alcohol, which are not intoxicating liquor as defined in these Regulations;
- (f) meat, yeast or vegetable extracts, soup or soup mixtures, or any similar product;
- (g) tomato juice, vegetable juice, or any preparation of any such juice or juices;
- (h) intoxicating liquor as defined in these Regulations;
- (i) any other unsweetened drink except soda water; and



- (j) any drink which is capable of being used as a medicine.

### **Natural mineral water**

**183A.**—(1) Natural mineral water shall be underground water obtained directly from underground water bearing strata and characterised by its content of certain mineral salts and their relative proportions, and the presence of trace elements or of other constituents.

(2) No water shall be advertised, labelled or sold as natural mineral water for the purposes of these Regulations unless documentary evidence to the satisfaction of the Director-General is furnished from the place of origin that the natural mineral water is genuine.

(3) Natural mineral water shall not be subjected to any treatment other than —

- (a) the filtration or decanting, preceded, if necessary, by oxygenation, to remove the unstable constituents, so long as such treatment does not alter the composition of the natural mineral water in respect of its stable constituents;
- (b) the total or partial elimination of carbon dioxide by exclusively physical methods; and
- (c) the addition of carbon dioxide, so long as the package containing the natural mineral water is labelled with the appropriate description.

(4) Notwithstanding anything to the contrary in these Regulations —

- (a) natural mineral water shall contain not more than —
  - (i) 0.005 ppm of antimony;
  - (ii) 0.01 ppm of arsenic, calculated as As;
  - (iii) 0.7 ppm of barium;
  - (iv) 5 ppm of borate, calculated as B;
  - (v) 0.003 ppm of cadmium;
  - (vi) 0.05 ppm of chromium, calculated as Cr;

- (vii) 1 ppm of copper;
- (viii) 0.07 ppm of cyanide;
- (ix) 0.01 ppm of lead;
- (x) 0.4 ppm of manganese;
- (xi) 0.001 ppm of mercury;
- (xii) 0.02 ppm of nickel;
- (xiii) 50 ppm of nitrate calculated as nitrate;
- (xiv) 0.1 ppm of nitrite calculated as nitrite;
- (xv) 0.01 ppm of selenium;
- (xvi) 3 ppm organic matter calculated as O<sub>2</sub>; and
- (xvii) 0.05 ppm of sulphide calculated as H<sub>2</sub>S,

and shall contain no detectable amounts of mineral oil, phenolic compounds, surface active agents, pesticides, polynuclear aromatic hydrocarbons and polychlorinated biphenyls; and

- (b) natural mineral water shall be —
  - (i) free from parasites and pathogenic micro-organisms;
  - (ii) free from sporulate sulphite-reducing anaerobes in any 50 ml sample examined; and
  - (iii) free from *Escherichia coli*, other coliforms, faecal streptococci and *Pseudomonas aeruginosa* in any 250 ml sample examined.

*[S 195/2011 wef 15/04/2011]*

- (5) Prepacked natural mineral water shall bear a label showing —

- (a) the name and location of the source of water; and

*[S 195/2011 wef 15/04/2011]*

- (b) the analytical composition giving characteristics to the product.

*[S 195/2011 wef 15/04/2011]*

(6) Where the natural mineral water contains more than 600 ppm of sulphate other than calcium sulphate, the package containing the natural mineral water shall bear a statement indicating that the natural mineral water may be laxative.

(6A) Where the natural mineral water contains more than 1 ppm of fluoride, the following words shall be printed on the label as part of, or in close proximity to, the name of the product or in an otherwise prominent position:

“contains fluoride”.

*[S 195/2011 wef 15/04/2011]*

(6B) Where the natural mineral water contains more than 1.5 ppm of fluoride, the following words shall be printed on the label in addition to the words referred to in paragraph (6A):

“The product is not suitable for infants and children under the age of seven years”.

*[S 195/2011 wef 15/04/2011]*

(7) For the purposes of this regulation, natural mineral water includes spring water.

### **Labelling of non-alcoholic drinks**

**184.**—(1) The term “non-alcoholic” shall be reserved only for those products which contain not more than 0.5% (v/v) alcohol at 20°C.

(2) Any drink for human consumption without dilution which incorporates the name of a fruit, vegetable or flower in its name but does not use the juice of that fruit, vegetable or flower shall be labelled in the following manner:

- (a) *(Name of fruit, vegetable or flower)* — ade;
- (b) *(Name of fruit, vegetable or flower)* flavoured drink; and
- (c) Imitation *(name of fruit, vegetable or flower)* drink.

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**ALCOHOLIC DRINKS****Intoxicating liquors**

**185.**—(1) Intoxicating liquor shall be a liquor of any description containing more than 0.5% (v/v) alcohol at 20°C and which is fit, or intended or can by any means be converted for use as a beverage, and includes “toddy” but does not include denatured spirit.

(2) No liquor for which medicinal properties are claimed shall be advertised, labelled or sold as food.

**Ale, beer, lager, porter or stout**

**186.** Ale, beer, lager, porter or stout shall be a fermented liquid containing not less than 1.0% (v/v) alcohol at 20°C. It shall be brewed from a mash of malted or other grain and sugar or dextrose or both, with hops or other harmless vegetable bitters.

**Wine**

**187.**—(1) Wine shall be the product solely of the alcoholic fermentation of the juice or must of grapes with or without the addition of pure grape spirit fortification.

(2) Dry wine means wine produced by complete fermentation of the sugar contained in the juice or must of the grapes from which it is made.

(3) Sweet wine means wine containing sugar derived only from the juice or must of the grapes from which it is made.

(4) In these Regulations, the common name for wine shall also mean any words indicating the specific type of grapes from which the wine is made or the locality from which the grapes used originated or the locality in which the wine was made.

**Malt wine**

**188.** Malt wine, or any wine which purports to contain any malt extract, shall be wine conforming to the general standard for wine, to which has been added malt extract, so that the resultant wine contains not less than 5% (w/v) malt extract.

**Quinine wine**

**189.** Quinine wine shall be wine containing quinine or compounds of quinine (calculated as quinine hydrochloride) in proportion of not less than 0.5 and not more than 2.3 mg per ml.

**Aromatic wine, wine cocktail and vermouth**

**190.** Aromatic wine, wine cocktail and vermouth shall be wine to which has been added harmless botanical bitters, aromatics or other permitted flavouring agents. It may be coloured with caramel and may be sweetened with sugar, dextrose, invert sugar, raisins or other dried grapes. It shall contain not more than 24.0% (v/v) alcohol at 20°C.

**Port and sherry**

**191.** Port and sherry shall be fortified wines and shall contain not less than 17.0% (v/v) alcohol at 20°C.

**Meat wine or beef wine**

**192.** Meat wine or beef wine, or any wine which purports to contain any extract of meat or beef shall be wine conforming to the general standard for wine, to which has been added meat extract or beef extract, so that the resultant wine contains not less than 2% protein.

**Sparkling wine**

**193.—(1)** Sparkling wine shall be wine that contains no carbon dioxide other than that generated intrinsically from ingredients during its manufacture.

(2) The word “champagne” shall not be used in respect of produce which is carbonated in any way other than by the traditional method of fermentation in the bottle.

**Carbonated wine**

**194.** Carbonated wine shall be wine to which industrial carbon dioxide has been artificially added.

**Fruit wine**

**195.**—(1) Fruit wine shall be the product of the alcoholic fermentation of the juice, or of the juice and other portions of fruit other than grapes.

(2) No fruit wine shall be labelled with the word “wine” unless the name of the fruit from which it is made immediately precedes the word “wine”. The name of the fruit shall be in letters of the same size and colour as the word “wine”.

**Cider or perry**

**196.**—(1) Cider or perry shall be the product of the alcoholic fermentation of the juice or must of sound apples or pears, respectively.

(2) The word “champagne” or any other words of similar meaning shall not be used in reference to cider and perry.

**Sparkling cider or sparkling perry**

**197.** Sparkling cider or sparkling perry shall be cider or perry that contains no carbon dioxide other than that generated intrinsically from ingredients during its manufacture.

**Aerated cider or aerated perry**

**198.** Aerated cider or aerated perry means cider or perry that is impregnated either naturally or artificially with carbon dioxide under pressure.

**Honey wine**

**199.** Honey wine shall be the product of the alcoholic fermentation of honey with or without the addition of caramel, harmless natural botanical flavours and honey spirit.

**Cereal grain wine and Chinese wine**

**200.**—(1) Cereal grain wine and Chinese wine or “chiew” (“jiu”) or “samsu” shall be the product of the alcoholic fermentation of any wholesome cereal grain.

(2) No cereal grain “wine” or Chinese wine shall be labelled with the word “wine” unless the name of the cereal from which it is made or the Chinese name of the product is spelt out in English immediately preceding the word “wine”. The names shall be in letters of the same size and colour as those for the word “wine”.

(3) Every container or receptacle containing cereal grain wine or Chinese wine shall bear a label indicating the alcohol content.

### **Brandy**

**201.**—(1) Brandy shall be the alcoholic distillate of the fermented juice of fresh grapes matured by storage in wood to develop its characteristics, without the admixture of any other spirits.

*[S 515/2006 wef 01/09/2006]*

(2) Brandy shall contain not less than 37.0% (v/v) alcohol at 20°C.

(3) *[Deleted by S 515/2006 wef 01/09/2006]*

### **Marc brandy**

**202.** Marc brandy shall be the potable spirit distilled from the skin and pulp of grapes after the withdrawal of the juice of wine therefrom.

### **Fruit brandy**

**203.** Fruit brandy shall be the alcoholic distillate obtained by the distillation of —

- (a) fruit wine or a mixture of fruit wines;
- (b) a mixture of wine and fruit wine; or
- (c) a fermented mash of sound ripe fruit or mixture of fruits or a mixture of such distillates.

### **Whisky**

**204.**—(1) Whisky shall be the alcoholic distillate obtained from a mash of cereal grain or cereal grain products matured by storage in wood to develop its characteristics, with or without the addition of caramel.

*[S 515/2006 wef 01/09/2006]*

(2) *[Deleted by S 704/2020 wef 31/08/2020]*

(3) Flavoured whisky shall be whisky with the addition of permitted flavouring agent.

(4) Whisky shall contain not less than 37.0% (v/v) alcohol at 20°C.

(5) *[Deleted by S 515/2006 wef 01/09/2006]*

## **Rum**

**205.**—(1) Rum shall be the alcoholic distillate obtained from sugar-cane products. It may contain caramel and may be flavoured with fruit or other harmless botanical substances or permitted flavouring agents.

(2) Rum shall contain not less than 37.0% (v/v) alcohol at 20°C.

## **Gin**

**206.**—(1) Gin, including Holland, Geneva and Genever shall be the product made from neutral spirit or suitably rectified spirit flavoured with the volatile products of juniper berries with or without other natural flavouring substances, and may contain sugar.

(2) Dry Gin shall be gin to which no sugar has been added.

(3) Gin of all varieties shall contain not less than 37.0% (v/v) alcohol at 20°C.

## **Vodka**

**207.**—(1) Vodka shall be the potable alcoholic beverage obtained from spirit and from carbohydrate and shall be without distinctive character, aroma or taste.

(2) Vodka shall contain not less than 37.0% (v/v) alcohol at 20°C.

## **Liqueurs and alcoholic cordials**

**208.** Liqueurs and alcoholic cordials shall be obtained by the mixing or distillation of spirits with or over fruits, flowers, leaves or other harmless botanical substances or their juices, or with extracts derived by infusion, percolation or maceration of such botanical substances with or without permitted flavouring agent and colouring



matter, and to which sucrose or dextrose or both have been added in an amount not less than 2.5% (w/v) of the finished product.

### **Blended liquor**

**209.** Blended liquor shall be liquor consisting of a blend of a number of liquors each of which is separately entitled to the same generic description.

### **Compounded liquor**

**210.**—(1) Compounded liquor shall be liquor consisting of a number of different liquors not separately entitled to the same generic description. A compounded liquor shall not include in its nomenclature any geographic denomination of origin unless each of the different liquors comprising the compound is separately entitled to that geographic denomination.

(2) No compounded liquor shall be labelled as liquor unless the name of the liquor is preceded by the word “compounded” which shall be in letters of the same size and colour as those for the name of the liquor. The label of such liquor shall, in addition to the normal requirement for liquor, include the words “Compounded in . . .” and in such blank space shall be specified the name of the country where the compounding was effected.

## **SALTS**

### **Salt**

**211.** Salt, other than crude rock salt, shall be crystalline sodium chloride and shall contain on a dry basis not more than —

- (a) 1.4% calcium sulphate;
- (b) 0.5% calcium and magnesium chlorides; and
- (c) 0.1% other matters insoluble in hot deci-normal solution of hydrochloric acid.

Where the label contains a statement that the salt is free running, the salt may also contain not more than 2% of a permitted anti-caking agent.

**Iodised salt**

**212.** Iodised salt shall be salt that contains potassium or sodium iodide or iodate in a proportion equivalent to not less than 25 and not more than 40 parts of iodide in every million parts of salt.

**SPICES AND CONDIMENTS****Spices and condiments**

**213.** Spices and condiments shall be sound, aromatic vegetable substances used for flavouring of food, from which no portion of any oil or other flavouring substance, naturally contained in them, has been removed. The standard specified for the various spices shall apply to spices whether whole, partly ground or in powder form.

**Aniseed (Jintan manis)**

**214.** Aniseed (Jintan Manis) shall be the dried, ripe fruit of *Pimpinella anisum*. It shall be free from sand, earth, dirt and shall not be mixed with substituted seeds. It shall contain —

- (a) not more than 5% foreign seeds or matter;
- (b) not more than 9% total ash;
- (c) not more than 1.5% ash insoluble in hydrochloric acid; and
- (d) not less than 2% volatile oil.

**Caraway seed (Jintan)**

**215.** Caraway seed (Jintan) shall be the dried fruit of the caraway plant and shall contain not more than —

- (a) 5% foreign seeds;
- (b) 8% total ash; and
- (c) 1.5% ash insoluble in hydrochloric acid.

**Greater Cardamon (Kepulaga Besar) or Lesser Cardamon (Kepulaga Kecil)**

**216.—(1)** Cardamon or Greater Cardamon (Kepulaga Besar), and Cardamon or Lesser Cardamon (Kepulaga Kecil) shall be the dried,

nearly ripe fruits of the various species of the genus *Amomum* or *Electtaria cardemomum* respectively, and shall contain not more than —

(a) 8% total ash; and

(b) 3% ash insoluble in hydrochloric acid.

(2) Greater Cardamon shall contain not less than 1% volatile essential oil.

(3) Lesser Cardamon shall contain not more than 5% damaged seed or extraneous matter and not less than 3.5% volatile essential oil.

### **Celery seed (Biji Seladeri)**

**217.** Celery seed (Biji Seladeri) shall be the dried fruit of the celery plant and shall contain not more than —

(a) 10% total ash; and

(b) 2% ash insoluble in hydrochloric acid.

### **Chilli**

**218.** Chilli shall be the dried, ripe fruit of the genus *Capsicum* and may contain brownish yellow flat seeds and shall be free from insect infestation and extraneous colouring matter. It shall contain —

(a) not more than 3% calyces and pedicles;

(b) not more than 1% foreign organic matter;

(c) not more than 8% total ash;

(d) not more than 1.25% ash insoluble in hydrochloric acid;

(e) not more than 30% crude fibre; and

(f) not less than 12% non-volatile ether extract.

### **Cinnamon (Kayu Manis)**

**219.** Cinnamon (Kayu Manis) shall be the dried bark of cultivated varieties of *Cinnamomum zeylanicum*, Nees, or *C. cassia* L., from which the outer layers may not have been removed. It shall contain —

(a) not more than 5% total ash;

- (b) not more than 2% ash insoluble in hydrochloric acid; and
- (c) not less than 0.5% volatile essential oil.

### **Cloves (Bunga Cengkih)**

**220.** Cloves (Bunga Cengkih) shall be the dried flower-buds of *Eugenia caryophyllata*. It shall not contain any exhausted or partly exhausted cloves or any foreign vegetable or mineral substances. It shall contain —

- (a) not more than 5% clove stem;
- (b) not more than 7% total ash;
- (c) not more than 0.5% ash insoluble in hydrochloric acid; and
- (d) not less than 15% volatile ether extract.

### **Coriander (Ketumbar)**

**221.** Coriander (Ketumbar) shall be the dried fruit of the coriander plant and shall contain not more than —

- (a) 7% total ash; and
- (b) 1.5% ash insoluble in hydrochloric acid.

### **Cumin seed (Jintan Putih)**

**222.** Cumin seed (Jintan Putih) shall be the dried fruit of *Cuminum cyminum* and shall contain not more than —

- (a) 5% foreign seeds;
- (b) 9.5% total ash; and
- (c) 1.5% ash insoluble in hydrochloric acid.

### **Black Cumin (Jintan Hitam)**

**223.** Black Cumin (Jintan Hitam) shall be the dried seeds of *Nigella sativa* Linn and shall contain —

- (a) not more than 5% foreign organic matter;
- (b) not more than 7% total ash;

- (c) not more than 1.25% ash insoluble in hydrochloric acid; and
- (d) not less than 0.5% volatile oil.

### **Dill seed (Adas Manis)**

**224.** Dill seed (Adas Manis) shall be the dried fruit of the dill plant and shall contain not more than —

- (a) 10% total ash; and
- (b) 3% ash insoluble in hydrochloric acid.

### **Fennel fruit or seeds (Adas Pedas)**

**225.** Fennel fruit or seeds (Adas Pedas) shall be the dried, ripe fruit of cultivated plants of *Foeniculum vulgare*. It shall be free from sand, earth or other dirt and shall contain —

- (a) not more than 4% foreign organic matter, seeds or stalks;
- (b) not more than 9% total ash;
- (c) not more than 2% ash insoluble in hydrochloric acid; and
- (d) not less than 4% volatile oil.

### **Fenugreek (Halba)**

**226.** Fenugreek (Halba) shall be the dried ripe seeds of *Trigonella foenum-graecum* and shall be free from insect infestation and shall contain not more than —

- (a) 5% damaged extraneous weed seeds;
- (b) 5% foreign organic matter; and
- (c) 7% total ash.

### **Ginger**

**227.** Ginger shall be the washed and dried or the decorticated and dried rhizome of *Zingiber officinale* and shall be free from damage by pests. It shall contain —

- (a) not less than 4.5% alcohol (90%) soluble extract;

- (b) not more than 7% total ash;
- (c) not less than 1.7% water soluble ash;
- (d) not less than 10% cold water soluble extract; and
- (e) not more than 1% lime as calcium oxide.

[S 152/2017 wef 01/04/2017]

### **Mace (Jaitree) (Bunga Pala)**

**228.**—(1) Mace (Jaitree) (Bunga Pala) shall be the dried outer coat or arillus of the fruit *Myristica fragrans* and shall not contain the arillus of any other variety of *Myristica* including *M. malabarica* or *Fatua* (Bombay mace) and *M. argentes* (Wild mace).

(2) Mace (Jaitree) (Bunga Pala) shall contain not more than —

- (a) 5% deteriorated article or extraneous or foreign organic matter;
- (b) 3% total ash; and
- (c) 10% crude fibre,

and the non-volatile ethyl ether extract, obtained after extraction of mace with petroleum ether, shall not exceed 5% and the sum of the non-volatile extracts with petroleum ether and ethyl ether shall not exceed 33%.

### **Mustard seed (Biji Sawi)**

**229.**—(1) Mustard seed (Biji Sawi) shall be the dried, ripe seed of *Brassica nigra*, *Brassica juncea* and other allied cultivated varieties of the species belonging to the natural order Cruciferae and to the genus *Sinapis* or *Brassica*.

(2) Mustard seed (Biji Sawi) shall include black or brown mustard (*B. nigra*), brown or serepta mustard (*B. besseriana*), white or yellow mustard (*B. alba*) and Indian mustard (*B. juncea*).

(3) Mustard seed (Biji Sawi) shall contain —

- (a) not more than 5% foreign organic matter, and deteriorated or other seeds;
- (b) not more than 5% total ash;

- (c) not more than 1.5% ash insoluble in hydrochloric acid; and
- (d) not less than 0.6% volatile essential oil.

### **Prepared mustard**

**230.** Prepared mustard (compound mustard, mustard condiment) shall be made from mustard seed mixed with flour or starch, with or without spices, except that the proportions of flour or starch, and spices (if any) shall not together exceed 20% by weight. It shall yield not less than 0.35% allyl isothiocyanate after maceration with water for two hours at 37°C.

### **Nutmeg (Buah Pala)**

**231.** Nutmeg (Buah Pala) shall be the dried seed (kernel) of the fruit of *Myristica fragrans*. It shall be free from insect infestation and shall contain —

- (a) not more than 5% total ash;
- (b) not more than 0.5% ash insoluble in hydrochloric acid;
- (c) not more than 10% crude fibre; and
- (d) not less than 25% non-volatile ether extract.

### **Black pepper or pepper corn**

**232.** Black pepper or pepper corn shall be the sound fruit of *Piper nigrum* and shall contain —

- (a) not more than 3% deteriorated fruits or any extraneous matter;
- (b) not more than 5% light berries;
- (c) not more than 8% total ash;
- (d) not more than 1.5% ash insoluble in hydrochloric acid;
- (e) not less than 6.75% non-volatile ether extract; and
- (f) not less than 30% starch.

**White pepper**

**233.** White pepper shall be the dried, mature berry of *Piper nigrum* L. from which the outer coating or the outer and inner coatings are removed and shall contain —

- (a) not more than 5% of crude fibre;
- (b) not more than 3.5% of total ash;
- (c) not more than 0.3% of ash insoluble in hydrochloric acid;
- (d) not less than 7% of non-volatile ether extract; and
- (e) not less than 52% of pepper starch.

**Star anise (Bunga Pekak)**

**234.** Star anise (Bunga Pekak) shall be the dried, ripe fruit of *Illicium verum* Hooker filius. It shall be free from admixture by *Illicium anisatum* Linn.

**Tumeric (Kunyit)**

**235.** Turmeric (Kunyit) shall be the dried rhizome or bulbous root of *Curcuma longa* and shall include turmeric in whatever form. It shall be free from damage by pest. It shall not contain lead chromate or artificial colouring matter; and shall not contain more than 2.5 ppm of lead. It shall conform to the following standards:

- (a) the characteristic boric acid test shall be positive;
- (b) the total ash shall not be more than 7%; and
- (c) the ash insoluble in hydrochloric acid shall not exceed 1.5%.

**Curry powder**

**236.** Curry powder shall be any combination of spices, aromatic seeds and aromatic herbs. It shall contain not less than 85% of spices, aromatic seeds and aromatic herbs, and shall contain not more than 15% farinaceous matter and salt.



## FLAVOURING ESSENCES OR EXTRACTS

**Almond essence**

**237.** Almond essence, almond extract or almond flavour shall contain not less than 1% by volume the hydrocyanic acid-free volatile oil obtained from the kernels of the bitter almond, apricot or peach.

**Ginger essence**

**238.** Ginger essence, ginger extract or ginger flavour shall contain in 100 ml the alcohol-soluble matter from not less than 20g of ginger.

**Lemon essence**

**239.** Lemon essence, lemon extract or lemon flavour shall be prepared from natural or terpeneless oil of lemon or from lemon peel and shall contain not less than 0.2% citral derived from oil of lemon.

**Lemon oil**

**240.** Lemon oil or oil of lemon shall be the volatile oil obtained from the fresh peel of the lemon (*Citrus limonum*, L.) and shall have —

- (a) a specific gravity at 15.5°C of not less than 0.854 and not more than 0.862;
- (b) an optical rotation at 20°C of not less than +56 degrees and not more than +65 degrees;
- (c) a refractive index at 25°C of not less than 1.470 and not more than 1.480; and
- (d) not less than 3.5% of aldehydes calculated as citral.

**Orange essence**

**241.** Orange essence, orange extract or orange flavour shall be prepared from sweet orange peel, oil of sweet orange, or terpeneless oil of sweet orange, and shall correspond in flavouring strength to an alcoholic solution containing 5% by volume of oil of sweet orange, the volatile oil obtained from the fresh peel of *Citrus aurantium* L. that shall have an optical rotation, at a temperature of 25°C, of not less than +95 degrees using a tube 100 mm in length.

**Peppermint essence**

**242.** Peppermint essence, peppermint extract or peppermint flavour shall be prepared from peppermint or oil of peppermint, obtained from the leaves and flowering tops of *Mentha piperita* L. or of *Mentha arvensis* De.C., var. *piperascens* Holmes, and shall correspond in flavouring strength to an alcoholic solution of not less than 3% by volume of oil of peppermint, containing not less than 50% free and combined menthol.

**Rose essence**

**243.** Rose essence, rose extract or rose flavour shall contain not less than 0.4% by volume attar of rose, the volatile oil obtained from the petals of *Rosa damascena* Mill, *R. centifolia* L., or *R. moschata* Herm.

**Vanilla extract**

**244.** Vanilla extract, vanilla essence or vanilla flavour shall be prepared from the vanilla bean, the dried, cured fruit of *Vanilla planifolia*, Andrews. It shall yield a lead number of not less than 0.55 as determined by Wichmann's method and shall contain not less than 0.1% vanillin. It shall not contain any foreign substance except sugar and shall not contain less than 2.1 g total solids other than sugar in 100 ml.

**Flavouring essences**

**245.** Flavouring essences shall comply with regulation 22.

**FLAVOUR ENHANCERS****Monosodium glutamate**

**246.** Monosodium glutamate or the mono-sodium salt of L-glutamic acid shall contain not less than 98% of the mono-sodium salt of glutamic acid on a dry basis and shall have a specific rotation in 0.5% normality hydrochloric acid at a temperature of 25°C of not less than +24.2 degrees and not more than +25.5 degrees.

## SPECIAL PURPOSE FOODS

### Special purpose foods

**247.**—(1) In these Regulations, “special purpose food” shall be a food named or described as particularly suitable for consumption by persons belonging to a particular class who require a special diet. It shall be composed of food substance modified, prepared or compounded so as to possess nutritive and assimilative properties which render it specially suitable for use as food by these persons requiring the special diet.

(2) Special purpose food shall include diabetic food, food containing added phytosterols, phytosterol esters, phytostanols or phytostanol esters, low sodium food, gluten-free food, low protein food, carbohydrate-modified food, low calorie food, energy food, infant formula food and formulated food.

*[S 195/2011 wef 15/04/2011]*

(3) Special purpose food may contain, unless otherwise prohibited under these Regulations, vitamins, minerals, amino acids and other nutrient supplements.

### Labelling requirements for special purpose foods

**248.**—(1) Every package of special purpose food, unless otherwise exempted, shall bear a label containing a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General and adequate information to support any claim made for that food.

(2) No package of a special purpose food that contains carbohydrate shall be labelled with the word “sugarless” or “sugar-free” or any words of similar meaning.

### Low-calorie food

**249.**—(1) Low-calorie food shall be special purpose food that is particularly suitable for persons adopting a restricted calorie diet.

(2) Low-calorie food of the types specified in the first column of the following table shall not have a total caloric value exceeding those shown in the second column of that table in relation to those types:

| <i>First Column</i>                     |   | <i>Second Column</i> |
|---|---|----------------------|
| Beverages (ready for consumption)       | — | 8 kcal/100 ml        |
| Bread spreads including jam substitutes | — | 100 kcal/100 g       |
| All other foods                         | — | 50 kcal/100 g.       |

(3) Every package of low-calorie food shall be labelled with a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General.

### **Diabetic food**

**250.**—(1) Diabetic food shall be special purpose food that is particularly suitable for diabetics.

(2) Every package of diabetic food shall be labelled with a nutrition information panel in the form specified in the Twelfth Schedule or in such other similar form as may be acceptable to the Director-General, and such nutrition information panel shall include a statement as to the nature of the carbohydrates present in the food.

### **Foods containing phytosterols, phytosterol esters, phytostanols or phytostanol esters**

**250A.**—(1) Food containing added phytosterols, phytosterol esters, phytostanols or phytostanol esters shall be special purpose food that is particularly suitable for persons who require a special diet for the purposes of lowering blood cholesterol levels.

(2) Phytosterols, phytosterol esters, phytostanols or phytostanol esters may be added to —

- (a) any edible vegetable fat or oil containing not more than 20 g of saturated fatty acids per 100 g of total fat;

[S 152/2017 wef 01/04/2017]

- (b) any margarine or fat spread containing not more than 27 g of saturated fatty acids per 100 g of total fat; or

*[S 152/2017 wef 01/04/2017]*

- (c) any other food containing not more than 3 g of total fat per 100 g or 1.5 g of total fat per 100 ml.

*[S 816/2014 wef 15/12/2014]*

(3) Where any food with added phytosterols, phytosterol esters, phytostanols or phytostanol esters is sold or intended for sale, the can, bottle or other receptacle in which the food is contained shall have appearing thereon or attached thereto a label with the following statements or statements to the like effect:

- (a) The product is a special purpose food intended for people who want to lower their blood cholesterol level;

*[S 816/2014 wef 15/12/2014]*

- (b) *[Deleted by S 816/2014 wef 15/12/2014]*

- (c) The product may not be nutritionally appropriate for pregnant and breast-feeding women and children under the age of 5 years;

- (d) The product should be used as part of a balanced and varied diet;

*[S 816/2014 wef 15/12/2014]*

- (e) Consumption in a day of a total of more than 3 g of phytosterols (whether in free form or as derived from any phytosterol esters) or phytostanols (whether in free form or as derived from any phytostanol esters), or both, does not provide any additional benefit in lowering blood cholesterol levels;

*[S 816/2014 wef 15/12/2014]*

- (f) Consumption in a day of a total of at least 2 g of phytosterols (whether in free form or as derived from any phytosterol esters) or phytostanols (whether in free form or as derived from any phytostanol esters), or both, has been shown to lower blood cholesterol levels; and

*[S 816/2014 wef 15/12/2014]*

- (g) A statement suggesting the amount of the food (in g or ml) to be consumed each time (referred to as a serving), and a statement of the total amount of phytosterols (whether in free form or as derived from any phytosterol esters) and phytostanols (whether in free form or as derived from any phytostanol esters) that each serving contains.

*[S 195/2011 wef 15/04/2011]*

*[S 816/2014 wef 15/12/2014]*

### **Infants' food**

**251.**—(1) Infants' food shall be any food described or sold as suitable for infants and shall include infant formula.

(2) Infants' food, other than infant formula formulated for infants from birth to 6 months of age, shall be food intended for feeding infants as a complementary food from over the age of 6 months, and shall be free from rancidity.

*[S 195/2011 wef 15/04/2011]*

(2A) No label or advertisement for infants' food, other than infant formula formulated for infants from birth to 6 months of age, shall state or imply that such food is suitable for infants of or below 6 months of age.

*[S 195/2011 wef 15/04/2011]*

(3) Infants' food shall not contain added mono-sodium salt of L-glutamic acid; and neither nitrates nor nitrites, other than those present naturally in foods, shall be used in any preparation of infants' food.

(4) Infants' food shall not contain any chemical preservative.

(5) Infants' food shall be date-marked in accordance with regulation 10.

### **Infant formula**

**252.**—(1) Infant formula shall be any food described or sold as an alternative to human milk for the feeding of infants. It shall be a product prepared from milk of cows or other animals or both or from

other edible constituents of animals, including fish, or plants and which have been proved suitable for infant feeding.

(2) Infant formula prepared in accordance with the directions on the label shall have an energy value of not less than 640 kcal and not more than 720 kcal per litre of the product ready for consumption.

(3) Infant formula shall contain per 100 kcal of intake the following:

- (a) not less than 1.8 g and not more than 4 g protein of nutritional quality equivalent to that of casein or greater quantity of other protein in proportion to its nutritional quality. The quality of the protein shall not be less than 85% of that of casein;
- (b) not less than 3.3 g and not more than 6 g fat and not less than 0.3 g linoleic acid in the form of glycerides;
- (c) not less than 75 mcg and not more than 150 mcg Vitamin A expressed as retinol;
- (d) not less than 40 and not more than 100 I.U. of Vitamin D;  
*[S 195/2011 wef 15/04/2011]*
- (e) not less than 8 mg Vitamin C (ascorbic acid);
- (f) not less than 40 mcg Vitamin B1 (thiamine);
- (g) not less than 60 mcg Vitamin B2 (riboflavin);
- (h) not less than 250 mcg nicotinamide;
- (i) not less than 35 mcg Vitamin B6. Formulae with a higher protein content than 1.8 g protein/100 kcal shall contain a minimum of 15 mcg Vitamin B6 per gram protein;
- (j) not less than 4 mcg folic acid;
- (k) not less than 300 mcg pantothenic acid;
- (l) not less than 0.15 mcg Vitamin B12;
- (m) not less than 4 mcg Vitamin K1;
- (n) not less than 1.5 mcg Vitamin H (Biotin);

- (o) not less than 0.7 I.U. Vitamin E (d-tocopherol compounds) per g linoleic acid (or per g polyunsaturated fatty acids, expressed as linoleic acid) but in no case less than 0.7 I.U./100 kcal;
- (p) not less than 20 mg and not more than 60 mg sodium (Na);
- (q) not less than 80 mg and not more than 200 mg potassium (K);
- (r) not less than 55 mg and not more than 150 mg chloride (Cl);
- (s) not less than 50 mg calcium (Ca) and the Calcium: Phosphorus (Ca:P.) ratio shall be not less than 1.2 and not more than 2.0;
- (t) not less than 25 mg of phosphorus (P) and the Calcium: Phosphorus (Ca:P.) ratio shall be not less than 1.2 and not more than 2.0;
- (u) not less than 6 mg magnesium (Mg);
- (v) not less than 0.15 mg iron (Fe);
- (w) not less than 5 mcg iodine (I);
- (x) not less than 60 mcg copper (Cu);
- (y) not less than 0.5 mg zinc (Zn);
- (z) not less than 5 mcg manganese (Mn); and
- (za) not less than 1 mcg and not more than 5 mcg selenium (Se).

[S 195/2011 wef 15/04/2011]

(4) For the purpose of calculating the number of kilocalories supplied by a food referred to in this regulation —

- (a) 1 g of any fat in that food shall be deemed to supply 9 kcal;
- (b) 1 g of any protein in that food shall be deemed to supply 4 kcal;
- (c) 1 g of any carbohydrate in that food shall be deemed to supply 4 kcal.



(5) Isolated amino acids may be added to infant formula only to improve its nutritional value. Essential amino acids may be added to improve protein quality, only in amounts necessary for that purpose. Only natural L-forms of amino acids shall be used.

(6) The following ingredients may be added to infant formula in order to provide substances ordinarily found in human milk and to ensure that the formulation is suitable as the sole source of nutrition for the infant or to provide other benefits that are similar to outcomes of populations of breastfed babies:

- (a) Nucleotides listed below, provided that the total level of nucleotides (including added and endogenous nucleotides) shall not exceed 16 mg per 100 kcal:
  - (i) Cytidine 5'-Monophosphate;
  - (ii) Uridine 5'-Monophosphate;
  - (iii) Adenosine 5'-Monophosphate;
  - (iv) Guanosine 5'-Monophosphate; and
  - (v) Inosine 5'-Monophosphate;
- (b) Long chain (20 and 22 carbon atoms) polyunsaturated fatty acids (LCP) but their content shall not exceed —
  - (i) 1% of the total fat content for n-3 LCP; and
  - (ii) 2% of the total fat content for n-6 LCP (1% of the total fat content for arachidonic acid),and the eicosapentaenoic acid (20:5 n-3) content shall not exceed that of docosahexaenoic (22:6 n-3) acid content;
- (c) Galacto-oligosaccharides, long chain inulin and oligofructose produced from inulin, in an amount not exceeding a total level of 0.8 g per 100 ml;
- (d) Polydextrose, in an amount not exceeding a total level of 0.2 g per 100 ml;

[S 493/2013 wef 01/08/2013]

- (e) Bovine lactoferrin, in an amount not exceeding 100mg per 100ml;

[S 49/2016 wef 02/02/2016]

[S 195/2011 wef 15/04/2011]

[S 152/2017 wef 01/04/2017]

- (f) Beta-palmitin, with at least 52% of total palmitic acid esterified at the beta position, in an amount not exceeding 80% of the total fat content of infant formula;

[S 152/2017 wef 01/04/2017]

[S 146/2018 wef 28/03/2018]

- (g) 2'-fucosyllactose, in an amount not exceeding 120 mg per 100 ml;

[S 146/2018 wef 28/03/2018]

- (h) Lacto-N-neotetraose, in an amount not exceeding 60 mg per 100 ml.

[S 146/2018 wef 28/03/2018]

(7) In the case of infant formula that is sold or to be sold as infant formula which is lactose free, low lactose or words of similar import, the total lactose content must not be greater than 10 mg per 100 kcal.

[S 580/2019 wef 01/09/2019]

(8) [*Deleted by S 195/2011 wef 15/04/2011*]

(9) [*Deleted by S 195/2011 wef 15/04/2011*]

### **Infant milk formula or infant milk preparation**

**253.** Infant milk formula or infant milk preparation shall be infant formulae prepared from cow's milk. It may have part or whole of its butterfat replaced by vegetable oils. It shall comply with the standards laid down for infant formula.

### **Labelling of infant formula**

**254.—**(1) Every package of infant formula, other than infant milk formula, shall bear a label indicating the sources of protein. Such indication shall be printed immediately after the common name "infant formula" or any appropriate designation.

- (2) There shall be printed on the label for infant formula —
- (a) directions as to the method of preparing the food;
  - (aa) a warning statement about the health hazards of improper use, preparation or storage of infant formula;  
*[S 580/2019 wef 01/09/2019]*
  - (b) the amount of energy and the number of grams of protein, fat and carbohydrate per 100 ml or other equivalents of formula prepared in accordance with the directions on the label;
  - (c) the total quantity of each vitamin and mineral per 100 ml or other equivalents of formula prepared in accordance with the directions on the label;
  - (d) a statement suggesting the amount of the prepared food to be given each time, and the number of times such amount is to be given per day; such statement shall be given for each month of the infants' age up to 6 months;
  - (e) directions for storage and information regarding its keeping qualities before and after the container has been opened;  
*[S 580/2019 wef 01/09/2019]*
  - (f) information that infants above the age of 6 months should start to receive supplemental foods in addition to the formula, where the infant formula is intended for infants above the age of 6 months; and  
*[S 302/2017 wef 15/06/2017]*  
*[S 580/2019 wef 01/09/2019]*
  - (g) prominently displayed statements, starting with the words "IMPORTANT NOTICE" or words of similar import, to ensure that a consumer understands that —
    - (i) breast milk is best for infants; and
    - (ii) the infant formula should be used on the advice of a doctor or healthcare practitioner.  
*[S 580/2019 wef 01/09/2019]*

(3) Without limiting paragraph (2), the label on a package of any infant formula for infants, or an advertisement about any infant formula for infants, must not (and without affecting regulations 8A, 9, 9A, 9B, 11 and 12) contain —

- (a) a claim which states, suggests or implies that the infant formula or a component, ingredient, constituent or other feature of the infant formula, has, or may have, a health effect;
- (b) a claim which directly or indirectly compares the infant formula, or a component, ingredient, constituent or other feature of the infant formula, to breast milk;
- (c) any of the following prohibited matter:
  - (i) a pictorial, graphic or symbolic representation of an infant or infants (whether or not accompanied by text);
  - (ii) a pictorial, graphic or symbolic representation of a pregnant woman or nursing woman (whether or not accompanied by text);
  - (iii) a word like “humanised” or “maternalised”, or words of similar import;
  - (iv) a claim which directly or indirectly idealises the use or effect of the infant formula;

*Example of idealisation claims*

A representation which suggests or implies that the use or consumption of the infant milk formula results in exaggerated health or other effect.

- (d) a claim which states, suggests or implies the energy, carbohydrate and other nutritive property of any ingredient of the infant formula which is not mentioned in regulation 252(5) and (6), except to the extent permitted by paragraph (4) or (5);

*Examples of prohibited text claims*

- (a) “Contains vitamin D”.
- (b) “Contains essential nutrients”.

- (c) “Added with vitamins and minerals”.
- (d) “Enriched with iron”.
- (e) where the infant formula contains any ingredient mentioned in regulation 252(5) or (6), a claim which states, suggests or implies that the infant formula is enriched or fortified, or is an excellent source of these ingredients;

*Examples of prohibited text claims*

- (a) “Excellent source of DHA”.
- (b) “25% higher in DHA”.
- (c) “High in nucleotides”.
- (d) “Enriched with nucleotides”.

*[S 580/2019 wef 01/09/2019]*

(4) A label on any package of any infant formula, or an advertisement about any infant formula, may contain a claim which states, suggests or implies the presence of hydrolysed milk protein or whey protein in the infant formula.

*[S 580/2019 wef 01/09/2019]*

(5) Without limiting paragraph (2), the label on a package of any infant formula which is sold or to be sold as lactose free or low lactose must (and without affecting regulations 8A, 9, 9A, 9B, 11 and 12) include —

- (a) the words “lactose free” or “low lactose”, or words of similar import;
- (b) a statement within the nutrition information panel on the label, specifying the exact amount of lactose in the infant formula; and
- (c) the words “Not suitable for infants with galactosaemia” in the same font and size as, and in close proximity to, the words mentioned in sub-paragraph (a), if the infant formula is manufactured from protein sources other than soya protein isolates.

*[S 580/2019 wef 01/09/2019]*

(6) In paragraphs (3) and (4) —

“claim” means any message or representation, and includes a pictorial, graphic or symbolic representation;

“health effect” means an effect on the human body, including an effect on one or more of the following:

- (a) growth and development;
- (b) physical performance;
- (c) mental performance;
- (d) a biochemical process or outcome;
- (e) a physiological process or outcome;
- (f) a functional process or outcome;

“pictorial representation” includes a graphic representation and an anthropomorphic or humanlike depiction.

*[S 580/2019 wef 01/09/2019]*

## MISCELLANEOUS FOODS

### Agar

**255.**—(1) Agar (agar-agar) shall be the dried, purified mucilaginous food obtained by aqueous extraction of seaweeds of different species of *Gelidium* and *Gracilaria*.

(2) Agar shall contain on a dry basis not more than —

- (a) 7.1% total ash; and
- (b) 1% ash insoluble in hydrochloric acid.

(3) Agar shall yield with water a practically colourless and tasteless solution.

### Custard powder

**256.** Custard powder shall be a powder prepared from starch with or without other food substances, permitted colouring matter or permitted flavouring agents.

**Edible gelatin**

**257.**—(1) Edible gelatin shall be the purified food obtained by extraction of such tissues as skin, ligaments and bones of animals. A 5% solution of edible gelatin in warm water shall be free from objectionable taste and offensive odour.

(2) Edible gelatin shall contain —

- (a) not more than 18% moisture;
- (b) not more than 3.25% total ash; and
- (c) not less than 15% nitrogen on a dry basis.

**Fish crackers**

**258.**—(1) Fish crackers (unfried) shall be the food product made of starch with or without the addition of other flours in which wholesome fish has been added.

(2) Fish crackers may contain salt, flavour and permitted colouring matter and shall contain not less than 8% protein (total nitrogen x 6.25) on a dry basis.

**Prawn crackers**

**259.**—(1) Prawn crackers (unfried) shall be the food product made of starch with or without the addition of other flours in which wholesome prawns or extract of prawns or both have been added.

(2) Prawn crackers may contain salt, flavour and permitted colouring matter and shall contain not less than 3.4% protein (total nitrogen x 6.25) on a dry basis.

**RICE****Rice**

**260.**—(1) Every package of rice shall bear a label on which shall be indicated the following particulars:

- (a) the type of rice, namely, white rice, glutinous rice, cargo or brown rice, or boiled or parboiled rice;

- (b) the grain composition of rice in the package, described, wherever possible, in the terms laid down in column 1 of the Table in paragraph (3) or, otherwise, by stating the percentages by weight of whole kernel, head rice, big brokens and broken kernels contained in the package;

[S 195/2011 wef 15/04/2011]

- (c) the net quantity of rice in the package expressed in grams or kilograms, as appropriate;

[S 195/2011 wef 15/04/2011]

[S 152/2017 wef 01/04/2017]

- (d) the brand, if any; and
- (e) the name and address in Singapore of the local importer, packer, distributor or agent.

- (2) For the purposes of paragraph (1)(a) —

- (a) white rice shall be rice which has been husked and milled white by removing its bran layers;
- (b) cargo or brown rice shall be rice of which only the husk has been removed; and
- (c) boiled or parboiled rice shall be rice which has been milled after undergoing process of soaking, steaming and drying.

(3) The terms in column 1 of the Table shall not be used on any label on any package of rice unless the grain composition of rice in the package is in accordance with the corresponding description of grain composition in column 2 of the Table.

TABLE  
DESCRIPTION OF GRAIN COMPOSITION

| <i>Column 1</i>   | <i>Column 2</i>                          |                                   |  |
|-------------------|--|-----------------------------------|--|
|                   | Grain Composition (Percentage by weight) |                                   |  |
|                   | Whole kernel<br>(Not less than)          | Broken Kernels<br>(Not more than) | Remarks                                    |
| 100% Whole kernel | 60                                       | 5                                 | The rest shall consist of head rice or big |



|             |                    |                      |   |
|-------------|--------------------|----------------------|---|
|             |                    |                      | brokens, except that<br>100% whole kernel<br>shall not contain big<br>brokens |
| 5% Broken   | 60                 | 7                    |   |
| 10% Broken  | 55                 | 12                   |   |
| 15% Broken  | 55                 | 17                   |   |
| 20% Broken  | 50                 | 23                   |   |
| 25% Broken  | 40                 | 28                   |   |
| 35% Broken  | 32                 | 40                   |   |
| 45% Broken  | 28                 | 50                   |   |
| Broken Rice | Not more<br>than 5 | Not less than<br>80* |   |

[S 195/2011 wef 15/04/2011]

(4) For the purpose of paragraphs (1)(b) and (3) —

(a) whole kernel shall be a full rice kernel without any broken part;

[S 195/2011 wef 15/04/2011]

(b) head rice shall be a rice kernel which has been broken leaving its length at least four-fifths the average length of the unbroken rice kernel;

(c) big broken shall be a rice kernel which has been broken leaving its length at least half but less than four-fifths the average length of the unbroken rice kernel; and

(d) broken kernel shall be a rice kernel which has been broken leaving its length less than half the average length of the unbroken rice kernel.

(5) Notwithstanding regulation 5(4)(e), no country shall be named on any label on any package of rice implying that the rice originated from that country unless all the rice contained in the package originated from that country.

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\* Including big brokens.

## PART V

## PENALTY

**Penalty**

**261.** Any person who contravenes any of the provisions of these Regulations shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$1,000 and in the case of a second or subsequent conviction to a fine not exceeding \$2,000.

## FIRST SCHEDULE

Regulation 5(4)(b)

PERMITTED USE OF GENERAL TERMS IN THE DECLARATION OF  
INGREDIENTS

The following substances may be designated by generic terms in the list of ingredients:

| <i>Substance</i>   | <i>Generic Terms</i>  |
|--|---|
| Fish when forming an ingredient of fish products   | Fish.   |
| Imitation cream when forming an ingredient of some other food  | Imitation cream.  |
| Prepared purified starch when forming an ingredient of some other food, except modified starch   | Starch.   |
| Any deodorised edible vegetable oil, whether hydrogenated or not, when forming an ingredient of any food other than edible fats and oils                                 | Vegetable oil/fat qualified by the words 'hydrogenated' or 'partially-hydrogenated' as appropriate. |
| Any deodorised edible vegetable oil that is fully hydrogenated or not hydrogenated, when forming an ingredient of any food other than edible fats and oils               | Vegetable oil/fat qualified by the words 'fully hydrogenated' if appropriate.                       |
| The following modified starches:   |   |
| Dextrin roasted starch, acid-treated starch, alkaline-treated starch, bleached starch, oxidised starch, enzyme-treated starch, monostarch phosphate, distarch phosphate, | Modified starch.  |

FIRST SCHEDULE — *continued*

phosphate distarch phosphate, acetylated distarch phosphate, starch acetate, acetylated distarch adipate, hydroxypropyl starch, hydroxypropyl distarch phosphate, starch sodium octenyl succinate, acetylated oxidised starch

Herbs when forming an ingredient of some other food at a level not exceeding 2% by weight of such food

Herbs.

Spices, when forming an ingredient of some other food at a level not exceeding 2% by weight of such food

Spices.

Colourings, when forming an ingredient of some other food

Colourings/colouring matter.

Emulsifiers and stabilisers, when forming an ingredient of some other food

Emulsifiers/stabilisers or emulsifying/stabilising agents.

Flavourings, when forming an ingredient of some other food

Flavouring.

*[Deleted by S195/2011 wef 15/04/2011]*

The following gums:

Acacia, karaya, tragacanth, carob, gellan, ghatti, guar and xanthan gums

Edible gum.

Any edible animal fats, other than pork fat, lard and beef fat, when forming an ingredient of any food

Animal fats.

*[S 424/2020 wef 01/06/2021]*

*[S 49/2016 wef 02/02/2016]*

*[S 195/2011 wef 15/04/2011]*

## SECOND SCHEDULE

Regulation 10

## DATE-MARKING OF PREPACKED FOOD

1. Cream, reduced cream, light cream, whipped cream and sour cream excluding sterilised canned cream.

SECOND SCHEDULE — *continued*

2. Cultured milk and cultured milk drink.
3. Pasteurised milk and pasteurised milk drink.
4. Yoghurt, low-fat yoghurt, fat-reduced yoghurt, non-fat yoghurt and yoghurt products.
5. Pasteurised fruit juice and pasteurised fruit juice drink.
6. Pasteurised vegetable juice and pasteurised vegetable juice drink.
7. Tofu, “tauhu” or “doufu”, a soya beancurd product made of basically soya beans, water and a coagulant, including “egg tofu”, “taukua” or “dougan”, and the soft soya beancurd desert known as “tauhui”, “tofa” or “doughua”, but excluding the oil fried tofu in the form of a pouch known as “taupok”, and the dried beancurd stick.
8. Food which is stored or required to be stored at a chilling temperature to maintain or prolong its durable life, including ready-to-eat minimally processed fruits and vegetables such as cut fruits and vegetables but excluding all other forms of raw fruits and vegetables.
9. Vitaminised fruit juice and vitaminised fruit juice drink.
10. Vitaminised vegetable juice and vitaminised vegetable juice drink.
11. Liquid milk and liquid milk products excluding condensed milk, sweetened condensed milk, evaporated milk and canned sterilised milk and milk products.
12. Flour.
13. Salad dressing.
14. Mayonnaise.
15. Raisins and sultanas.
16. Chocolate, milk chocolate and chocolate confectionery in which the characteristic ingredient is chocolate or cocoa, with or without the addition of fruits and nuts.
17. Breakfast-cereal with or without fruits and nuts except cereal in cans.
18. Infants’ food.
19. Edible cooking oils.

## THIRD SCHEDULE

Regulations 17(3) and 125(2)(b)

## PERMITTED ANTI-OXIDANTS

1. Subject to paragraph 2, the articles of food specified in column 1 of the following table may have in them or on them the anti-oxidant specified in relation thereto in column 2 in amounts not exceeding the number of parts per million specified in relation thereto in column 3:

| <i>Column 1</i><br><i>Specified Food</i>  | <i>Column 2</i><br><i>Description of Anti-oxidant</i>                     | <i>Column 3</i><br><i>Parts per million</i> |
|---|---|---|
| (a) Anhydrous edible oils and fats, whether hardened or not, margarine, vitamin oils and concentrates containing not more than 100,000 I.U. of Vitamin A per gram | Propyl gallate or Octyl gallate or Dodecyl gallate or any mixture thereof | 100   |
|   | or  |   |
|   | Butylated hydroxyanisole (B.H.A.)   | 200   |
|   | or  |   |
|   | Butylated hydroxytoluene (B.H.T.)   | 200   |
|   | or  |   |
|   | Tertiary butylhydroquinone (TBHQ)   | 200   |
|   | or  |   |
|   | Ascorbyl palmitate  | 200   |
|   | or  |   |
| Isopropyl citrate mixture (including monoisopropyl citrate)   | 100   |   |
| or  |   |   |

THIRD SCHEDULE — *continued*

|  |  |     |
|--|--|-----|
|  | Any mixture of B.H.A.<br>and B.H.T.  | 200 |
| (aa) Ghee                                | Propyl gallate   | 100 |
|  | or   |     |
|  | Butylated<br>hydroxyanisole (B.H.A.)   | 175 |
| (b) Partial Glycerol Esters              | Propyl gallate or Octyl<br>gallate or Dodecyl<br>gallate or any mixture<br>thereof | 100 |
|  | or   |     |
|  | Butylated<br>hydroxyanisole (B.H.A.)   | 200 |
|  | or   |     |
|  | Butylated<br>hydroxytoluene (B.H.T.)   | 200 |
|  | or   |     |
|  | Tertiary<br>butylhydroquinone<br>(TBHQ)  | 200 |
|  | or   |     |
|  | Ascorbyl palmitate   | 500 |
|  | or   |     |
|  | Any mixture of B.H.A.<br>and B.H.T.  | 200 |
| (c) Butter for manufacturing<br>purposes | Propyl gallate or Octyl<br>gallate or Dodecyl<br>gallate or any mixture<br>thereof | 80  |
|  | or   |     |
|  | Tertiary<br>butylhydroquinone<br>(TBHQ)  | 160 |
|  | or   |     |

THIRD SCHEDULE — *continued*

|  |   |                                     |
|--|---|-------------------------------------|
|  | Butylated hydroxyanisole (B.H.A.)   | 160                                 |
|  | or  |                                     |
|  | Butylated hydroxytoluene (B.H.T.)   | 160                                 |
|  | or  |                                     |
|  | Ascorbyl palmitate  | 500                                 |
|  | or  |                                     |
|  | Any mixture of B.H.A. and B.H.T.  | 160                                 |
| (d) Essential oils and isolates from the concentrates of essential oils  | Propyl gallate or Octyl gallate or Dodecyl gallate or any mixture thereof | 100                                 |
|  | or  |                                     |
|  | Butylated hydroxyanisole (B.H.A.)   | 200                                 |
|  | or  |                                     |
|  | Butylated hydroxytoluene (B.H.T.)   | 200                                 |
|  | or  |                                     |
|  | Tertiary butylhydroquinone (TBHQ)   | 200                                 |
|  | or  |                                     |
|  | Ascorbyl palmitate  | 500                                 |
|  | or  |                                     |
|  | Any mixture of B.H.A. and B.H.T.  | 200                                 |
| (e) Apples and pears   | Ethoxyquin  | 3                                   |
| (f) Preparations containing more than 100,000 I.U. of Vitamin A per gram | Butylated hydroxyanisole (B.H.A.)   | 10 for each 1,000 I.U. of Vitamin A |

THIRD SCHEDULE — *continued*

|                       |                                      |   |
|-----------------------|--------------------------------------|---|
|                       | or                                   |   |
|                       | Butylated<br>hydroxytoluene (B.H.T.) | 10 for each<br>1,000 I.U. of<br>Vitamin A |
|                       | or                                   |   |
|                       | Any mixture of B.H.A.<br>and B.H.T.  | 10 for each<br>1,000 I.U. of<br>Vitamin A |
| (g) Dehydrated meat   | Butylated<br>hydroxyanisole (B.H.A.) | 200                                       |
|                       | or                                   |   |
|                       | Propyl gallate                       | 200                                       |
| (h) Breakfast cereals | Butylated<br>hydroxyanisole (B.H.A.) | 200 (on a fat<br>or oil basis)            |
|                       | or                                   |   |
|                       | Butylated<br>hydroxytoluene (B.H.T.) | 100 (on a fat<br>or oil basis)            |

2. Butylated hydroxyanisole or butylated hydroxytoluene or mixtures thereof within the limits specified in this Schedule may be used in conjunction with propyl gallate or octyl gallate or dodecyl gallate or mixtures thereof within the limits specified in this Schedule, provided that the total amount of anti-oxidant shall not exceed, in the case of specified foods in items (a) and (b) 300 parts per million, in the case of specified foods in item (aa) 200 parts per million, in the case of specified foods in item (c) 240 parts per million and in the case of specified foods in item (d) 300 parts per million.

3. The articles of food specified in column 1 of the following table may have in them or on them rosemary extract in amounts not exceeding the number of parts per million specified in column 2:

| <i>Column 1</i>       | <i>Column 2</i>   |
|-----------------------|---|
| <i>Specified Food</i> | <i>Parts per million (expressed as sum of carnosol and carnosic acid)</i> |
| (a) Dehydrated meat   | 150   |
| (b) Dried sausages    | 100   |



THIRD SCHEDULE — *continued*

| <i>Column 1</i>  | <i>Column 2</i>   |
|--|---|
| <i>Specified Food</i>  | <i>Parts per million (expressed as sum of carnosol and carnosic acid)</i> |
| (c) Edible vegetable oils and fats, excluding olive oil  | 50  |
| (d) Fish oil and algal oil   | 50  |
| (e) Lard, beef fat, poultry fat, sheep fat and porcine fat                                     | 50  |
| (f) Processed meat other than dried sausages:  |   |
| (i) with a fat content of 10% or less  | 15 (on a fat or oil basis)  |
| (ii) with a fat content of more than 10%   | 150 (on a fat or oil basis)   |
| (g) Processed nuts, including coated nuts and nut mixtures                                     | 200 (on a fat or oil basis)   |
| (h) Sauces, gravies and dressings, and their mixes   | 100 (on a fat or oil basis)   |
| (i) Snacks — potato, cereal, flour or starch based (from roots and tubers, pulses and legumes) | 50 (on a fat or oil basis)  |
| (j) Vegetable, nut and seed spreads  | 200 (on a fat or oil basis)   |

[S 704/2020 wef 31/08/2020]

## FOURTH SCHEDULE

Regulations 19(3)(b) and (c),  
62(3), 63(3) and 66(3)

## PART I

PERMITTED CLASS II CHEMICAL PRESERVATIVES  
IN SELECTED FOODS

| Selected Foods   | Maximum amount of Chemical Preservative in Parts per Million |              |                              |             |                |                |
|--|--|--------------|------------------------------|-------------|----------------|----------------|
|  | Chemical Preservative No. 1                                  | 2            | 3                            | 4           | 5              | 6              |
|  | Calculated as Sulphur dioxide                                | Benzoic acid | Methyl para-hydroxy benzoate | Sorbic acid | Sodium nitrite | Sodium nitrate |
| Beer   | 25   | 70           | 70                           |             |                |                |
| Bread  |  |              |                              | 1,000       |                |                |
| Cabbage, dehydrated                                    | 2,500  |              |                              |             |                |                |
| Candied peel or cut and drained (syruped) peel         | 100  |              |                              |             |                |                |
| Canned abalone (paua)                                  | 1,000  |              |                              |             |                |                |
| Cheese (excluding processed cheese and ripened cheese) |  |              |                              | 1,000       |                |                |
| Cheese, processed                                      |  |              |                              | 3,000       |                |                |
| Cheese, ripened  |  |              |                              | 1,000       |                | 50             |
| Cider  | 200  |              |                              |             |                |                |
| Coconut, dessicated                                    | 50   |              |                              |             |                |                |
| Cocktail (alcoholic)                                   | 120  | 400          |                              |             |                |                |
| Coffee (or coffee mixture or liquid extract)           |  | 450          | 450                          |             |                |                |

FOURTH SCHEDULE — *continued*

| Selected Foods  | Maximum amount of Chemical Preservative in Parts per Million |              |                              |             |                |                |
|---|--|--------------|------------------------------|-------------|----------------|----------------|
|   | Chemical Preservative No. 1                                  | 2            | 3                            | 4           | 5              | 6              |
|   | Calculated as Sulphur dioxide                                | Benzoic acid | Methyl para-hydroxy benzoate | Sorbic acid | Sodium nitrite | Sodium nitrate |
| Colouring matter, if in the form of a solution of a permitted colouring matter        |  | 2,000        | 2,000                        | 1,000       |                |                |
| Cooked molluscs, crustaceans and echinoderms  |  | 2,000        |                              | 2,000       |                |                |
| Crustaceans, uncooked   | 100<br>(in the edible portion)                               |              |                              |             |                |                |
| Custard fillings and toppings (egg-based)   |  | 1,000        |                              | 1,000       |                |                |
| Decorations (icings and frostings), non-fruit fillings and toppings, and sweet sauces |  | 1,500        |                              | 1,000       |                |                |
| Desserts, fruit based, milk and cream   | 100  |              |                              |             |                |                |
| Drinking chocolate concentrate  |  | 700          | 700                          |             |                |                |
| Fat spread  |  |              |                              | 2,000       |                |                |
| Fillings and toppings based on fat emulsion   |  | 1,000        |                              | 1,000       |                |                |

FOURTH SCHEDULE — *continued*

| Selected Foods  | Maximum amount of Chemical Preservative in Parts per Million |              |                              |             |                |                |
|---|--|--------------|------------------------------|-------------|----------------|----------------|
|   | Chemical Preservative No. 1                                  | 2            | 3                            | 4           | 5              | 6              |
|   | Calculated as Sulphur dioxide                                | Benzoic acid | Methyl para-hydroxy benzoate | Sorbic acid | Sodium nitrite | Sodium nitrate |
| Fillings and toppings (fruit or vegetable based)                                    | 350  | 800          | 800                          | 450         |                |                |
| Fish, smoked and cured  |  |              |                              |             | 10             |                |
| Flavouring emulsions or flavouring syrup  | 350  | 800          | 800                          | 1,000       |                |                |
| Flour confectionery   |  |              |                              | 1,000       |                |                |
| Flour, all types  | 200  |              |                              |             |                |                |
| Formulated nutritional bars   |  |              |                              | 1,000       |                |                |
| Fruits, crystallised, glace or drained  | 100  | 1,000        | 1,000                        | 1,000       |                |                |
| Fruits, dried (apples, apricots, figs, nectarines, peaches, pears, prunes, raisins) | 2,000  |              |                              | 1,000       |                |                |
| Fruits (fresh, whole and unpeeled, except longans and lychees)                      | 30   |              |                              |             |                |                |
| Fruit or fruit pulp (other than tomato pulp) intended for manufacturing purposes    | 3,000  |              |                              | 1,000       |                |                |
| Fruit (other than fresh fruit or  | 350  | 800          | 800                          | 1,000       |                |                |

FOURTH SCHEDULE — *continued*

| Selected Foods   | Maximum amount of Chemical Preservative in Parts per Million |              |                              |             |                |                |
|--|--|--------------|------------------------------|-------------|----------------|----------------|
|  | Chemical Preservative No. 1                                  | 2            | 3                            | 4           | 5              | 6              |
|  | Calculated as Sulphur dioxide                                | Benzoic acid | Methyl para-hydroxy benzoate | Sorbic acid | Sodium nitrite | Sodium nitrate |
| fruit pulp not otherwise specified in this Table)                            |  |              |                              |             |                |                |
| Fruit drink or fruit crush   | 120  | 400          | 400                          | 400         |                |                |
| Fruit juices   | 120  | 400          | 400                          | 400         |                |                |
| Fruit juices, concentrate  | 350  | 800          | 800                          | 1,000       |                |                |
| Gelatin  | 750  |              |                              |             |                |                |
| Glucose drink containing solid contents not less than 23.5% (w/v) of glucose | 120  | 400          | 400                          | 400         |                |                |
| Hamburgers and similar products  | 450  |              |                              |             |                |                |
| Herbs and spices   | 150  |              |                              |             |                |                |
| Jam, including preserves sold for dietetic purposes                          | 100  | 500          | 500                          | 1,000       |                |                |
| Jellyfish, seasoned  |  |              |                              | 1,000       |                |                |
| Longans (fresh, whole and unpeeled)  | 50   |              |                              |             |                |                |
| Lyches (fresh, whole and unpeeled)   | 50   |              |                              |             |                |                |
| Margarine  |  |              |                              | 1,000       |                |                |

FOURTH SCHEDULE — *continued*

| Selected Foods  | Maximum amount of Chemical Preservative in Parts per Million |              |                              |             |                |                |
|---|--|--------------|------------------------------|-------------|----------------|----------------|
|   | Chemical Preservative No. 1                                  | 2            | 3                            | 4           | 5              | 6              |
|   | Calculated as Sulphur dioxide                                | Benzoic acid | Methyl para-hydroxy benzoate | Sorbic acid | Sodium nitrite | Sodium nitrate |
| Marzipan and sweetened nut paste  |  |              |                              | 1,000       |                |                |
| Meat, canned, cured, pickled, salted or smoked whether cooked or uncooked     |  |              |                              |             | 125            | 500            |
| Pectin, liquid  | 250  |              |                              |             |                |                |
| Perry   | 200  |              |                              | 200         |                |                |
| Pickles other than pickled vegetables that require washing before consumption | 100  | 250          | 250                          | 1,000       |                |                |
| Pickled vegetables that require washing before consumption                    | 100  | 1,000        | 1,000                        | 1,000       |                |                |
| Potatoes, raw, peeled   | 50   |              |                              |             |                |                |
| Potatoes, dehydrated  | 550  |              |                              |             |                |                |
| Salad dressing  | 300  | 750          | 250                          | 1,000       |                |                |
| Sauces  | 300  | 750          | 250                          | 1,000       |                |                |
| Sausages, or sausage meat   | 450  |              |                              |             | 125            | 500            |
| Semi-preserved caviar and other fish roe products                             |  | 2,000        |                              | 1,000       |                |                |

FOURTH SCHEDULE — *continued*

| Selected Foods   | Maximum amount of Chemical Preservative in Parts per Million |              |                              |             |                |                |
|--|--|--------------|------------------------------|-------------|----------------|----------------|
|  | Chemical Preservative No. 1                                  | 2            | 3                            | 4           | 5              | 6              |
|  | Calculated as Sulphur dioxide                                | Benzoic acid | Methyl para-hydroxy benzoate | Sorbic acid | Sodium nitrite | Sodium nitrate |
| Semi-preserved fish and fish products, including molluscs, crustaceans and echinoderms |  | 2,000        |                              | 2,000       |                |                |
| Silicon anti-foam emulsion   | 1,000  | 2,000        | 2,000                        | 1,000       |                |                |
| Soft drinks for consumption before dilution  | 350  | 800          | 800                          | 1,500       |                |                |
| Soft drinks for consumption without dilution (other than fruit drink or fruit crush)   | 70   | 160          | 160                          | 300         |                |                |
| Starches, prepared   | 100  |              |                              |             |                |                |
| Starch, hydrolysed (solid)   | 70   |              |                              |             |                |                |
| Starch, hydrolysed (syrup) (including glucose syrup)                                   | 400  |              |                              |             |                |                |
| Sugar or sugar syrups, other than sugar or sugar syrups for manufacturing purposes     | 20   |              |                              |             |                |                |
| Sugar or sugar syrups for  | 70   |              |                              |             |                |                |

FOURTH SCHEDULE — *continued*

| Selected Foods  | Maximum amount of Chemical Preservative in Parts per Million |              |                              |             |                |                |
|---|--|--------------|------------------------------|-------------|----------------|----------------|
|   | Chemical Preservative No. 1                                  | 2            | 3                            | 4           | 5              | 6              |
|   | Calculated as Sulphur dioxide                                | Benzoic acid | Methyl para-hydroxy benzoate | Sorbic acid | Sodium nitrite | Sodium nitrate |
| manufacturing purposes                                |  |              |                              |             |                |                |
| Tomato pulp, paste or puree                           | 350  | 800          | 800                          |             |                |                |
| Vegetables, dehydrated (other than cabbage or potato) | 2,000  |              |                              |             |                |                |
| Vinegar   | 200  |              |                              |             |                |                |
| Vinegar, imitation, artificial                        | 70   |              |                              |             |                |                |
| Wine (including alcoholic cordials)                   | 300  |              |                              | 200         |                |                |
| Yoghurt, fruits                                       | 60   | 120          | 120                          | 300         |                |                |

[S 152/2017 wef 01/04/2017]

[S 493/2013 wef 01/08/2013]

[S 146/2018 wef 28/03/2018]

[S 59/2019 wef 01/02/2019]

[S 704/2020 wef 31/08/2020]

## PART II

PERMITTED CLASS III CHEMICAL PRESERVATIVES  
IN SELECTED FOODS

| <i>Selected Foods</i>   | <i>Maximum amount of dimethyl dicarbonate in parts per million*</i> |
|---|---|
| Water-based flavoured drinks, including “sport”, “energy”, or | 250   |



FOURTH SCHEDULE — *continued*

|  |     |
|--|-----|
| “electrolyte” drinks and particulated drinks   |     |
| Ready-to-drink coffee, coffee substitutes, tea, herbal infusions, and other hot cereal and grain beverages (excluding cocoa) | 250 |
| Cider and perry  | 250 |
| Grape wines  | 200 |
| Wines (other than grape)   | 250 |
| Mead   | 200 |

\*Added level; residue of dimethyl dicarbonate not detected in the ready-to-eat food.

[S 493/2013 wef 01/08/2013]

## FIFTH SCHEDULE

Regulation 20(2)

## PERMITTED COLOURING MATTERS

## PART I

## SYNTHETIC ORGANIC COLOURS

1. *Red Shade:*

|               |                    |
|---------------|--------------------|
| allura red AC | Colour Index 16035 |
| amaranth      | Colour Index 16185 |
| carmoisine    | Colour Index 14720 |
| erythrosine   | Colour Index 45430 |
| ponceau 4R    | Colour Index 16255 |

2. *Yellow shade:*

|                   |                    |
|-------------------|--------------------|
| quinoline yellow  | Colour Index 47005 |
| sunset yellow FCF | Colour Index 15985 |
| tartrazine        | Colour Index 19140 |

3. *Green shade:*

|                                  |                    |
|----------------------------------|--------------------|
| copper complexes of chlorophylls | Colour Index 75810 |
|----------------------------------|--------------------|

FIFTH SCHEDULE — *continued*

|  |                    |
|--|--------------------|
| sodium and potassium salts of copper complexes of chlorophyllins | Colour Index 75815 |
| fast green FCF   | Colour Index 42053 |
| green S  | Colour Index 44090 |
| 4. <i>Blue Shade:</i>  |                    |
| brilliant blue FCF   | Colour Index 42090 |
| indigo carmine   | Colour Index 73015 |
| 5. <i>Brown shade:</i>   |                    |
| chocolate brown HT   | Colour Index 20285 |
| 6. <i>Black shade:</i>   |                    |
| brilliant black PN   | Colour Index 28440 |

[S 195/2011 wef 15/04/2011]

## PART II

## OTHER COLOURS

1. Plain caramel (also known as caustic caramel), caustic sulphite caramel, ammonia caramel, sulphite ammonia caramel and the colour obtained from cochineal.

[S 195/2011 wef 15/04/2011]

2. The following colouring matter of vegetable origin:

- (a) any colouring matter natural to edible fruits and vegetables, including beet red, grape skin extract (*Enociania*), red cabbage colour, lutein, lycopene and paprika extract;

[S 152/2017 wef 01/04/2017]

[S 59/2019 wef 01/02/2019]

- (b) any colouring matter from flowers, leaves, roots and other plant parts which are customarily used in the preparation of food, including alkannet, annatto, carotene, chlorophyll, curcumin, flavine, indigo, lutein, lutein esters from *Tagetes erecta*, orchid, osage orange, persian berry, safflower, saffron, sandalwood, turmeric; or

[S 704/2020 wef 31/08/2020]

FIFTH SCHEDULE — *continued*

- (c) the pure-colouring principles of any colouring matter referred to in sub-paragraph (a) or (b) whether isolated from such natural colours or produced synthetically.

[S 195/2011 wef 15/04/2011]

3. Bole or iron oxide, carbon black (prepared from vegetable sources only), titanium dioxide and solely for the external colouring of dragees and the decoration of food, gold or silver or aluminium in leaf or powder form.

[S 195/2011 wef 15/04/2011]

4. The aluminium or calcium salts (lakes) of any of the scheduled water-soluble colours.

5. Spirulina extract or cyanobacterial-phycoyanin extracted from *Spirulina platensis* that conforms to the following specifications:

- (a) not more than 2 mg/kg lead;
- (b) not more than 2 mg/kg arsenic;
- (c) not more than 1 mg/kg mercury;
- (d) negative for microcystin toxin.

[S 152/2017 wef 01/04/2017]

## SIXTH SCHEDULE

Regulation 21(2)

## PERMITTED EMULSIFIERS AND PERMITTED STABILISERS

Acetylated mono-glycerides; lactated mono-diglycerides; tartaric acid glycerides; diacetyl tartaric acid glycerides; citric acid glycerides;

Agar;

Alginic acid; ammonium alginate; calcium alginate; potassium alginate; sodium alginate;

Arabinogalactan (larch gum);

Carrageenan;

Caseinate, sodium, calcium and potassium;

Cellulose, methyl, ethyl, methyl ethyl, hydroxy propyl and hydroxy propyl methyl derivatives of; carboxy methyl cellulose; croscarmellose sodium; enzymatically hydrolysed sodium carboxymethyl cellulose (cellulose gum, enzymatically hydrolysed);

SIXTH SCHEDULE — *continued*

Curdlan;

Cyclodextrins, alpha- and gamma-;

Dioctyl sodium sulphosuccinate;

Ethyl hydroxyethyl cellulose;

Furcelleran;

Gums, acacia, carob, gellan, ghatti, guar, karaya, tara, tragacanth, and xanthan;

Konjac flour;

Lecithin;

Modified starches listed below:

Dextrin roasted starch, Acid-treated starch, Alkaline-treated starch, Bleached starch, Oxidised starch, Enzyme-treated starch, Monostarch phosphate, Distarch phosphate, Phosphated distarch phosphate, Acetylated distarch phosphate, Starch acetate, Acetylated distarch adipate, Hydroxypropyl starch, Hydroxypropyl distarch phosphate, Starch sodium octenyl succinate, Acetylated oxidised starch;

Mono and diglycerides of fatty acids;

Myristate, ammonium, calcium, potassium and sodium;

Oleate, calcium, potassium and sodium;

Palmitate, ammonium, calcium, potassium and sodium;

Partially hydrolysed lecithin;

Pectins, including amidated pectins;

Phosphates listed below:

Sodium dihydrogen phosphate, Disodium hydrogen phosphate, Trisodium phosphate, Potassium dihydrogen phosphate, Dipotassium hydrogen phosphate, Tripotassium phosphate, Tricalcium phosphate, Disodium diphosphate, Trisodium diphosphate, Tetrasodium diphosphate, Tetrapotassium diphosphate, Dicalcium diphosphate, Calcium dihydrogen diphosphate, Pentasodium triphosphate, Pentapotassium triphosphate, Sodium polyphosphate, Potassium polyphosphate, Calcium polyphosphate;

Polyglycerol esters of fatty acids;

Polyglycerol polyricinoleate;

Polyoxyethylene (20) sorbitan monolaurate (polysorbate 20);

SIXTH SCHEDULE — *continued*

Polyoxyethylene (20) sorbitan mono-palmitate (polysorbate 40);  
Polyoxyethylene (20) sorbitan monostearate (polysorbate 60);  
Polyoxyethylene (20) sorbitan mono-oleate (polysorbate 80);  
Polyoxyethylene (20) sorbitan tristearate (polysorbate 65);  
Processed Eucheuma seaweed;  
Propylene glycol esters of fatty acids; propylene glycol alginate;  
Stearate, ammonium, calcium, potassium and sodium;  
Stearoyl-2-lactic acid and its sodium and calcium salts; Stearyl tartrate;  
Sorbitan monostearate; sorbitan tristearate; sorbitan mono-palmitate; sorbitan monolaurate; sorbitan mono-oleate;  
Tamarind seed polysaccharide.

*[S 59/2019 wef 01/02/2019]*

*[S 146/2018 wef 28/03/2018]*

*[S 152/2017 wef 01/04/2017]*

*[S 195/2011 wef 15/04/2011]*

*[S 493/2013 wef 01/08/2013]*

*[S 444/2012 wef 03/09/2012]*

## SEVENTH SCHEDULE

Regulation 25(2)

## PERMITTED NUTRIENT SUPPLEMENT

## PART I: VITAMINS

## 1. VITAMIN A

Retinol

Retinyl acetate (Vitamin A acetate)

Retinyl palmitate (Vitamin A palmitate)

Retinyl propionate (Vitamin A propionate)

## 2. PRO-VITAMIN A

SEVENTH SCHEDULE — *continued*

Beta-carotene

3. VITAMIN D

Ergocalciferol (Vitamin D2)

Cholecalciferol (Vitamin D3)

Cholecalciferol-cholesterol (Vitamin D3)

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

4A. VITAMIN K1

Phylloquinone

4B. VITAMIN K2

Menaquinone-7

5. VITAMIN B1 (THIAMIN)

Thiamin hydrochloride

Thiamin mononitrate

6. VITAMIN B2 (RIBOFLAVIN)

Riboflavin

Riboflavin 5'-phosphate sodium

SEVENTH SCHEDULE — *continued*

## 7. NIACIN

Niacinamide

Nicotinamide

Nicotinic acid

## 8. VITAMIN B6

Pyridoxal

Pyridoxamine

Pyridoxine

Pyridoxine hydrochloride

## 9. BIOTIN (VITAMIN H)

D-biotin

## 10. FOLATE

Calcium L-methylfolate

Folic acid

## 11. PANTOTHENIC ACID

Calcium pantothenate

Sodium pantothenate

Panthenol (Dexpanthenol or D-pantothenyl alcohol)

## 12. VITAMIN B12

Cyanocobalamin

Hydroxocobalamin

## 13. VITAMIN C

Ascorbic acid

SEVENTH SCHEDULE — *continued*

Sodium ascorbate

Calcium ascorbate

Potassium ascorbate

Ascorbyl-6-palmitate

14. CHOLINE

Choline bitartrate

Choline chloride

15. INOSITOL

PART II: MINERALS

1. CALCIUM

Calcium carbonate

Calcium chloride

Calcium citrate

Calcium gluconate

Calcium glycerophosphate

Calcium hydroxide

Calcium lactate

Calcium oxide

Calcium phosphate, monobasic

Calcium phosphate, dibasic

Calcium phosphate, tribasic

Calcium pyrophosphate

Calcium sulphate

2. IRON

Carbonyl iron



SEVENTH SCHEDULE — *continued*

Electrolytic iron  
Ferric ammonium citrate  
Ferric citrate  
Ferric gluconate  
Ferric phosphate  
Ferric pyrophosphate  
Ferric saccharate  
Ferrous ammonium phosphate  
Ferrous bisglycinate  
Ferrous carbonate  
Ferrous citrate  
Ferrous fumarate  
Ferrous gluconate  
Ferrous lactate  
Ferrous succinate  
Ferrous sulphate  
Hydrogen reduced iron  
Sodium ferric pyrophosphate  
Sodium ferrous citrate

## 3. MAGNESIUM

Magnesium carbonate  
Magnesium chloride  
Magnesium citrate  
Magnesium gluconate  
Magnesium glycerophosphate  
Magnesium hydroxide  
Magnesium oxide  
Magnesium phosphate, dibasic

SEVENTH SCHEDULE — *continued*

Magnesium phosphate, tribasic

Magnesium sulphate

4. SODIUM

Sodium bicarbonate

Sodium carbonate

Sodium chloride

Sodium chloride, iodised

Sodium citrate

Sodium gluconate

Sodium hydroxide

Sodium lactate

Sodium phosphate, monobasic

Sodium phosphate, dibasic

Sodium phosphate, tribasic

Sodium sulphate

Sodium tartrate

5. POTASSIUM

Potassium bicarbonate

Potassium carbonate

Potassium chloride

Potassium citrate

Potassium gluconate

Potassium glycerophosphate

Potassium hydroxide

Potassium lactate

Potassium phosphate, monobasic

Potassium phosphate, dibasic

SEVENTH SCHEDULE — *continued*

## 6. COPPER

Copper gluconate

Cupric carbonate

Cupric citrate

Cupric sulphate

## 7. ZINC

Zinc acetate

Zinc chloride

Zinc citrate

Zinc gluconate

Zinc lactate

Zinc oxide

Zinc sulphate

## 8. MANGANESE

Manganese carbonate

Manganese chloride

Manganese citrate

Manganese gluconate

Manganese glycerophosphate

Manganese sulphate

## 9. PHOSPHORUS

Calcium phosphate, monobasic

Calcium phosphate, dibasic

Calcium phosphate, tribasic

Magnesium phosphate, dibasic

SEVENTH SCHEDULE — *continued*

Magnesium phosphate, tribasic  
Potassium phosphate, monobasic  
Potassium phosphate, dibasic  
Sodium phosphate, dibasic  
Phosphoric acid

10. CHLORIDE

Calcium chloride  
Choline chloride  
Magnesium chloride  
Manganese chloride  
Potassium chloride  
Sodium chloride  
Sodium chloride, iodised

11. IODINE

Potassium iodate  
Sodium iodate  
Potassium iodide  
Sodium iodide

12. CHROMIUM

Chromium chloride hexahydrate  
Chromium picolinate

13. MOLYBDENUM

Ammonium molybdate  
Sodium molybdate dihydrate

SEVENTH SCHEDULE — *continued*

## 14. SELENIUM

Sodium selenate

Sodium selenite

## PART III: AMINO ACIDS

L-Isoleucine

L-Isoleucine monohydrochloride

L-Leucine

L-Leucine monohydrochloride

L-Lysine

L-Lysine monohydrochloride

L-Lysine acetate

L-Methionine

L-Phenylalanine

L-Threonine

L-Tryptophan

L-Valine

*[S 59/2019 wef 01/02/2019]**[S 146/2018 wef 28/03/2018]**[S 152/2017 wef 01/04/2017]**[S 816/2014 wef 15/12/2014]**[S 444/2012 wef 03/09/2012]**[S 195/2011 wef 15/04/2011]**[S 704/2020 wef 31/08/2020]*

EIGHTH SCHEDULE

Regulation 28(2)

PART 1

PERMITTED GENERAL PURPOSE FOOD ADDITIVES

Acetic acid;  
Acetone;  
Adipic acid;  
Ammonium bicarbonate;  
Ammonium carbonate;  
Ammonium hydroxide;  
Ammonium phosphate (mono- and di-basic);  
Ammonium sulphate;  
Aspartame;  
Beeswax;  
Calcium carbonate;  
Calcium chloride;  
Calcium citrate;  
Calcium gluconate;  
Calcium hydroxide;  
Calcium lactate;  
Calcium phosphate (mono-, di-and tri-basic);  
Calcium sulphate;  
Candelilla wax;  
Carbon dioxide;  
Carnauba wax;  
Citric acid;  
Cyclotetraglucose;  
Cyclotetraglucose syrup;  
Erythritol;

EIGHTH SCHEDULE — *continued*

Fumaric acid;  
Glucono delta-lactone;  
Glycerin or Glycerol;  
Glycerol esters of citric, lactic and tartaric acids;  
Helium;  
High fructose syrup;  
Hydrochloric acid;  
Hydrogen peroxide;  
Hydrogenated starch hydrolysate (polyglycitol syrup);  
Isomalt;  
Lactic acid;  
Lactitol;  
Magnesium carbonate;  
Magnesium chloride;  
Magnesium oxide;  
Magnesium hydroxide;  
Magnesium hydroxide carbonate;  
Magnesium lactate;  
Magnesium stearate;  
Magnesium sulphate;  
Malic acid;  
Maltitol;  
Maltitol syrup (hydrogenated glucose syrup);  
Mannitol;  
Nitrogen;  
Nitrous oxide;  
Oligofructose (from chicory root);  
Peracetic acid;  
Phosphoric acid;

EIGHTH SCHEDULE — *continued*

Polydextrose;  
Polyethylene glycol;  
Polyvinylpyrrolidone, insoluble (polyvinylpolypyrrolidone);  
Potassium acid tartrate;  
Potassium bicarbonate;  
Potassium carbonate;  
Potassium chloride;  
Potassium citrate;  
Potassium hydroxide;  
Potassium sulphate;  
Propylene glycol;  
Pullulan;  
Shellac;  
Silica aerogel;  
Sodium acetate;  
Sodium acid sulphate (sodium hydrogen sulphate);  
Sodium chloride;  
Sodium aluminium phosphate;  
Sodium bicarbonate;  
Sodium carbonate;  
Sodium citrate;  
Sodium fumarate;  
Sodium hydroxide;  
Sodium phosphate (mono-, di- and tri-basic);  
Sodium potassium tartrate;  
Sodium pyrophosphate;  
Sodium sesquicarbonate;  
Sodium sulphate;  
Sodium tartrate;



EIGHTH SCHEDULE — *continued*

Sorbitol;  
 Sorbitol syrup;  
 Succinic acid;  
 Sucrose esters of fatty acids;  
 Sulphuric acid;  
 Sulphurous acid;  
 Tartaric acid;  
 Thaumatin;  
 Trehalose;  
 Triammonium citrate;  
 Xylitol.

[S 59/2019 wef 01/02/2019]

## PART 2

## PERMITTED ENZYMES

## (A) Enzymes derived from animal sources

| Enzyme                              | EC Number | Source   |
|-------------------------------------|-----------|--|
| Catalase                            | 1.11.1.6  | Bovine liver   |
| Lactoperoxidase                     | 1.11.1.7  | Bovine milk  |
| Lipase, triacylglycerol             | 3.1.1.3   | Bovine stomach; salivary glands or forestomach of calf, kid or lamb; porcine or bovine pancreas            |
| Lysozyme                            | 3.2.1.17  | Egg whites   |
| Pancreatin (or pancreatic elastase) | 3.4.21.36 | Pancreas of the hog or ox  |
| Pepsin                              | 3.4.23.1  | Bovine or porcine stomach  |
| Phospholipase A2                    | 3.1.1.4   | Porcine pancreas   |
| Rennet                              | 3.4.23.4  | Aqueous extracts from the fourth stomach of calves, kids, lambs, and adult bovine animals, sheep and goats |
| Thrombin                            | 3.4.21.5  | Bovine or porcine blood  |
| Trypsin                             | 3.4.21.4  | Porcine or bovine pancreas   |

EIGHTH SCHEDULE — *continued***(B) Enzymes derived from plant sources**

| Enzyme        | EC Number  | Source   |
|---------------|------------|--|
| Alpha-amylase | 3.2.1.1    | Malted cereals   |
| Actinidin     | 3.4.22.14  | Kiwifruit ( <i>Actinidia deliciosa</i> )                                       |
| Beta-amylase  | 3.2.1.2    | Malted cereals   |
|               |            | Sweet potato ( <i>Ipomoea batatas</i> )  |
| Bromelain     | 3.4.22.4   | Pineapple fruit/stem ( <i>Ananas comosus</i> and <i>Ananas bracteatus</i> (L)) |
| Ficin         | 3.4.22.3   | <i>Ficus</i> spp.  |
| Lipoxidase    | 1.13.11.12 | Soyabean whey or meal  |
| Papain        | 3.4.22.2   | <i>Carica papaya</i> (L) (Fam. <i>Caricaceae</i> )                             |

**(C) Enzymes derived from microbial sources**

| Enzyme                            | EC Number | Production organism                                | Donor organism                                  | Donor gene                        |
|-----------------------------------|-----------|--|---|-----------------------------------|
| 1,4-alpha-glucan branching enzyme | 2.4.1.18  | <i>Bacillus subtilis</i>                           | <i>Rhodothermus obamensis</i>                   | 1,4-alpha-glucan branching enzyme |
|                                   |           | <i>Geobacillus stearothermophilus</i> <sup>2</sup> |   |                                   |
| Alpha-acetolactate decarboxylase  | 4.1.1.5   | <i>Bacillus amyloliquefaciens</i>                  |   |                                   |
|                                   |           | <i>Bacillus licheniformis</i>                      | <i>Bacillus brevis</i>                          | Alpha-acetolactate decarboxylase  |
|                                   |           | <i>Bacillus subtilis</i>                           |   |                                   |
|                                   |           | <i>Bacillus subtilis</i>                           | <i>Bacillus brevis</i>                          | Alpha-acetolactate decarboxylase  |
| Alpha, alpha-trehalase            | 3.2.1.28  | <i>Trichoderma longibrachiatum</i> <sup>3</sup>    | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | Alpha, alpha-trehalase            |
| Alpha-amylase                     | 3.2.1.1   | <i>Aspergillus niger</i> <sup>1</sup>              |   |                                   |
|                                   |           | <i>Aspergillus niger</i> <sup>1</sup>              | <i>Aspergillus niger</i> <sup>1</sup>           | Alpha-amylase                     |
|                                   |           | <i>Aspergillus niger</i> <sup>1</sup>              | <i>Rhizomucor pusillus</i>                      | Alpha-amylase                     |
|                                   |           | <i>Aspergillus oryzae</i>                          |   |                                   |
|                                   |           | <i>Bacillus amyloliquefaciens</i>                  |   |                                   |
|                                   |           | <i>Bacillus amyloliquefaciens</i>                  | <i>Bacillus amyloliquefaciens</i>               | Alpha-amylase                     |
|                                   |           | <i>Bacillus licheniformis</i>                      |   |                                   |

EIGHTH SCHEDULE — *continued*

| Enzyme                         | EC Number  | Production organism                                | Donor organism  | Donor gene                     |
|--------------------------------|------------|--|---|--------------------------------|
|                                |            | <i>Bacillus licheniformis</i>                      | <i>Bacillus amyloliquefaciens</i>                                   | Alpha-amylase                  |
|                                |            | <i>Bacillus licheniformis</i>                      | <i>Bacillus licheniformis</i>                                       | Alpha-amylase                  |
|                                |            | <i>Bacillus licheniformis</i>                      | <i>Bacillus licheniformis</i> and <i>Bacillus amyloliquefaciens</i> | Alpha-amylase                  |
|                                |            | <i>Bacillus licheniformis</i>                      | <i>Geobacillus stearothermophilus</i> <sup>2</sup>                  | Alpha-amylase                  |
|                                |            | <i>Bacillus licheniformis</i>                      | <i>Pseudomonas stutzeri</i>   | Alpha-amylase                  |
|                                |            | <i>Bacillus subtilis</i>                           |   |                                |
|                                |            | <i>Bacillus subtilis</i>                           | <i>Bacillus megaterium</i>  | Alpha-amylase                  |
|                                |            | <i>Bacillus subtilis</i>                           | <i>Alicyclobacillus pohliae</i>                                     | Alpha-amylase                  |
|                                |            | <i>Bacillus subtilis</i>                           | <i>Geobacillus stearothermophilus</i> <sup>2</sup>                  | Alpha-amylase                  |
|                                |            | <i>Geobacillus stearothermophilus</i> <sup>2</sup> |   |                                |
|                                |            | <i>Geobacillus stearothermophilus</i> <sup>2</sup> | <i>Geobacillus stearothermophilus</i> <sup>2</sup>                  | Alpha-amylase                  |
|                                |            | <i>Microbacterium imperiale</i>                    |   |                                |
|                                |            | <i>Pseudomonas fluorescens</i>                     | <i>Thermococcales</i>   | Alpha-amylase                  |
|                                |            | <i>Rhizopus oryzae</i>                             |   |                                |
|                                |            | <i>Trichoderma longibrachiatum</i> <sup>3</sup>    | <i>Aspergillus kawachii</i>   | Alpha-amylase                  |
| Alpha-arabinofuranosidase      | 3.2.1.55   | <i>Aspergillus niger</i> <sup>1</sup>              |   |                                |
| Alpha-galactosidase            | 3.2.1.22   | <i>Aspergillus niger</i> <sup>1</sup>              |   |                                |
| Alpha-glucosidase (or maltase) | 3.2.1.20   | <i>Aspergillus niger</i> <sup>1</sup>              |   |                                |
|                                |            | <i>Aspergillus oryzae</i>                          |   |                                |
|                                |            | <i>Trichoderma longibrachiatum</i> <sup>3</sup>    | <i>Aspergillus niger</i> <sup>1</sup>                               | Alpha-glucosidase (or maltase) |
| Aminopeptidase                 | 3.4.11.1   | <i>Aspergillus oryzae</i>                          |   |                                |
|                                |            | <i>Lactococcus lactis</i>                          |   |                                |
| Amylomaltase                   | 2.4.1.25   | <i>Bacillus amyloliquefaciens</i>                  | <i>Thermus thermophilus</i>   | Amylomaltase                   |
| Aqualysin 1                    | 3.4.21.111 | <i>Bacillus subtilis</i>                           | <i>Thermus aquaticus</i>  | Aqualysin 1                    |
| Asparaginase                   | 3.5.1.1    | <i>Aspergillus niger</i> <sup>1</sup>              |   |                                |
|                                |            | <i>Aspergillus niger</i> <sup>1</sup>              | <i>Aspergillus niger</i> <sup>1</sup>                               | Asparaginase                   |

EIGHTH SCHEDULE — *continued*

| Enzyme  | EC Number | Production organism                             | Donor organism                                  | Donor gene                      |
|---|-----------|---|---|---------------------------------|
|   |           | <i>Aspergillus oryzae</i>                       |   |                                 |
|   |           | <i>Aspergillus oryzae</i>                       | <i>Aspergillus oryzae</i>                       | Asparaginase                    |
|   |           | <i>Bacillus subtilis</i>                        | <i>Pyrococcus furiosus</i>                      | Asparaginase                    |
| Aspergillopepsin I  | 3.4.23.18 | <i>Aspergillus niger</i> <sup>1</sup>           |   |                                 |
|   |           | <i>Aspergillus oryzae</i>                       |   |                                 |
|   |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | Aspergillopepsin I              |
| Aspergillopepsin II   | 3.4.23.19 | <i>Aspergillus niger</i> <sup>1</sup>           |   |                                 |
| Beta-amylase  | 3.2.1.2   | <i>Bacillus amyloliquefaciens</i>               |   |                                 |
|   |           | <i>Bacillus licheniformis</i>                   | <i>Bacillus flexus</i>                          | Beta-amylase                    |
|   |           | <i>Bacillus subtilis</i>                        |   |                                 |
| Beta-fructofuranosidase (invertase or saccharase)               | 3.2.1.26  | <i>Aspergillus japonicus</i>                    |   |                                 |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           |   |                                 |
|   |           | <i>Saccharomyces cerevisiae</i>                 |   |                                 |
| Beta-galactosidase (or lactase)                                 | 3.2.1.23  | <i>Aspergillus niger</i> <sup>1</sup>           |   |                                 |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus oryzae</i>                       | Beta-galactosidase (or lactase) |
|   |           | <i>Aspergillus oryzae</i>                       |   |                                 |
|   |           | <i>Bacillus circulans</i> ATCC 31382            |   |                                 |
|   |           | <i>Bacillus licheniformis</i>                   | <i>Bifidobacterium bifidum</i>                  | Beta-galactosidase (or lactase) |
|   |           | <i>Bacillus subtilis</i>                        | <i>Bifidobacterium bifidum</i>                  | Beta-galactosidase (or lactase) |
|   |           | <i>Kluyveromyces lactis</i> <sup>4</sup>        |   |                                 |
|   |           | <i>Kluyveromyces marxianus</i> <sup>5</sup>     |   |                                 |
|   |           | <i>Saccharomyces sp.</i>                        |   |                                 |
| Beta-glucanase (endo-beta glucanase or endo-1,3-beta-glucanase) | 3.2.1.6   | <i>Aspergillus niger</i> <sup>1</sup>           |   |                                 |
|   |           | <i>Aspergillus oryzae</i>                       |   |                                 |
|   |           | <i>Bacillus amyloliquefaciens</i>               |   |                                 |

EIGHTH SCHEDULE — *continued*

| Enzyme                          | EC Number | Production organism                             | Donor organism                                  | Donor gene  |
|---------------------------------|-----------|---|---|---|
|                                 |           | <i>Bacillus amyloliquefaciens</i>               | <i>Bacillus amyloliquefaciens</i>               | Beta-glucanase (endo-beta glucanase or endo-1,3-beta-glucanase) |
|                                 |           | <i>Bacillus subtilis</i>                        |   |   |
|                                 |           | <i>Bacillus subtilis</i>                        | <i>Bacillus subtilis</i>                        | Beta-glucanase (endo-beta glucanase or endo-1,3-beta-glucanase) |
|                                 |           | <i>Disporotrichum dimorphosphorum</i>           |   |   |
|                                 |           | <i>Humicola insolens</i>                        |   |   |
|                                 |           | <i>Rasamsonia emersonii</i> <sup>6</sup>        |   |   |
|                                 |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> |   |   |
| Beta-glucosidase                | 3.2.1.21  | <i>Aspergillus niger</i> <sup>1</sup>           |   |   |
| Carboxylesterase                | 3.1.1.1   | <i>Rhizomucor miehei</i> <sup>7</sup>           |   |   |
| Carboxypeptidase C              | 3.4.16.5  | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus niger</i> <sup>1</sup>           | Carboxypeptidase C  |
| Catalase                        | 1.11.1.6  | <i>Aspergillus niger</i> <sup>1</sup>           |   |   |
|                                 |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus niger</i> <sup>1</sup>           | Catalase  |
|                                 |           | <i>Micrococcus luteus</i> <sup>8</sup>          |   |   |
| Cellulase                       | 3.2.1.4   | <i>Aspergillus niger</i> <sup>1</sup>           |   |   |
|                                 |           | <i>Penicillium funiculosum</i>                  |   |   |
|                                 |           | <i>Rasamsonia emersonii</i> <sup>6</sup>        |   |   |
|                                 |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> |   |   |
|                                 |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | Cellulase   |
|                                 |           | <i>Trichoderma viride</i>                       |   |   |
| Chymosin                        | 3.4.23.4  | <i>Aspergillus niger</i> <sup>1</sup>           |   |   |
|                                 |           | <i>Aspergillus niger</i> var. <i>awamori</i>    | <i>Camelus dromedarius</i>                      | Chymosin  |
|                                 |           | <i>Escherichia coli</i> K-12 strain GE81        |   |   |
|                                 |           | <i>Kluyveromyces lactis</i> <sup>4</sup>        |   |   |
|                                 |           | <i>Kluyveromyces lactis</i> <sup>4</sup>        | <i>Calf prochymosin B</i>                       | Chymosin  |
| Cyclodextrin glucanotransferase | 2.4.1.19  | <i>Bacillus licheniformis</i>                   | <i>Thermoanaerobacter</i> sp.                   | Cyclodextrin glucanotransferase                                 |
|                                 |           | <i>Paenibacillus macerans</i> <sup>9</sup>      |   |   |

EIGHTH SCHEDULE — *continued*

| Enzyme  | EC Number                             | Production organism                      | Donor organism                           | Donor gene             |
|---|---------------------------------------|--|--|------------------------|
| Deaminase                                       | 3.5.4.6                               | <i>Aspergillus melleus</i>               |  |                        |
| Dextranase                                      | 3.2.1.11                              | <i>Chaetomium erraticum</i>              |  |                        |
|   |                                       | <i>Chaetomium gracile</i>                |  |                        |
|   |                                       | <i>Penicillium lilacinum</i>             |  |                        |
| Endo-arabinase                                  | 3.2.1.99                              | <i>Aspergillus niger</i> <sup>1</sup>    |  |                        |
| Endo-protease                                   | 3.4.21.26                             | <i>Aspergillus niger</i> <sup>1</sup>    |  |                        |
|   |                                       | <i>Aspergillus niger</i> <sup>1</sup>    | <i>Aspergillus niger</i> <sup>1</sup>    | Endo-protease          |
| Glucan 1,3-beta-glucosidase                     | 3.2.1.58                              | <i>Trichoderma harzianum</i>             |  |                        |
| Endo-1,3-beta-xylanase                          | 3.2.1.32                              | <i>Humicola insolens</i>                 |  |                        |
| Endo-1,4-beta-xylanase                          | 3.2.1.8                               | <i>Aspergillus niger</i> <sup>1</sup>    |  |                        |
|   |                                       | <i>Aspergillus niger</i> <sup>1</sup>    | <i>Aspergillus niger</i> <sup>1</sup>    | Endo-1,4-beta-xylanase |
|   |                                       | <i>Aspergillus niger</i> <sup>1</sup>    | <i>Rasamsonia emersonii</i> <sup>6</sup> | Endo-1,4-beta-xylanase |
|   |                                       | <i>Aspergillus oryzae</i>                |  |                        |
|   |                                       | <i>Aspergillus oryzae</i>                | <i>Aspergillus aculeatus</i>             | Endo-1,4-beta-xylanase |
|   |                                       | <i>Aspergillus oryzae</i>                | <i>Humicola lanuginosa</i> <sup>10</sup> | Endo-1,4-beta-xylanase |
|   |                                       | <i>Bacillus amyloliquefaciens</i>        |  |                        |
|   |                                       | <i>Bacillus licheniformis</i>            | <i>Bacillus licheniformis</i>            | Endo-1,4-beta-xylanase |
|   |                                       | <i>Bacillus subtilis</i>                 |  |                        |
|   |                                       | <i>Bacillus subtilis</i>                 | <i>Bacillus subtilis</i>                 | Endo-1,4-beta-xylanase |
|   |                                       | <i>Bacillus subtilis</i>                 | <i>Pseudoalteromonas haloplanktis</i>    | Endo-1,4-beta-xylanase |
|   |                                       | <i>Disporotrichum dimorphosporum</i>     |  |                        |
|   |                                       | <i>Humicola insolens</i>                 |  |                        |
|   |                                       | <i>Rasamsonia emersonii</i> <sup>6</sup> |  |                        |
| <i>Trichoderma longibrachiatum</i> <sup>3</sup> |                                       |  |  |                        |
| <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Aspergillus niger</i> <sup>1</sup> | Endo-1,4-beta-xylanase                   |  |                        |

EIGHTH SCHEDULE — *continued*

| Enzyme                                  | EC Number | Production organism                             | Donor organism                                | Donor gene                                      |
|---|-----------|---|---|---|
|   |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Aspergillus tubingensis</i>                | Endo-1,4-beta-xylanase                          |
|   |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Thermopolyspora flexuosa</i> <sup>11</sup> | Endo-1,4-beta-xylanase                          |
| Glucoamylase (or amyloglucosidase)      | 3.2.1.3   | <i>Aspergillus niger</i> <sup>1</sup>           |   |   |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus niger</i> <sup>1</sup>         | Glucoamylase (or amyloglucosidase)              |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Gloeophyllum trabeum</i>                   | Glucoamylase (or amyloglucosidase)              |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Penicillium oxalicum</i>                   | Glucoamylase (or amyloglucosidase)              |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Talaromyces emersonii</i>                  | Glucoamylase (or amyloglucosidase)              |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Trametes cingulata</i>                     | Glucoamylase (or amyloglucosidase)              |
|   |           | <i>Aspergillus oryzae</i>                       |   |   |
|   |           | <i>Rhizopus delemar</i>                         |   |   |
|   |           | <i>Rhizopus niveus</i>                          |   |   |
|   |           | <i>Rhizopus oryzae</i>                          |   |   |
|   |           |   |   | <i>Trichoderma longibrachiatum</i> <sup>3</sup> |
| Glucose isomerase (or xylose isomerase) | 5.3.1.5   | <i>Actinoplanes missouriensis</i>               |   |   |
|   |           | <i>Bacillus coagulans</i>                       |   |   |
|   |           | <i>Microbacterium arborescens</i>               |   |   |
|   |           | <i>Streptomyces olivaceus</i>                   |   |   |
|   |           | <i>Streptomyces olivochromogenes</i>            |   |   |
|   |           | <i>Streptomyces murinus</i>                     |   |   |
|   |           | <i>Streptomyces rubiginosus</i>                 |   |   |
|   |           | <i>Streptomyces rubiginosus</i>                 | <i>Streptomyces rubiginosus</i>               | Glucose isomerase (or xylose isomerase)         |
| Glucose oxidase                         | 1.1.3.4   | <i>Aspergillus niger</i> <sup>1</sup>           |   |   |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus niger</i> <sup>1</sup>         | Glucose oxidase                                 |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Penicillium chrysogenum</i>                | Glucose oxidase                                 |
|   |           | <i>Aspergillus oryzae</i>                       | <i>Aspergillus niger</i> <sup>1</sup>         | Glucose oxidase                                 |

EIGHTH SCHEDULE — *continued*

| Enzyme  | EC Number | Production organism                             | Donor organism   | Donor gene                                      |
|---|-----------|---|--|---|
|   |           | <i>Penicillium chrysogenum</i>                  |  |   |
| Glutaminase                                     | 3.5.1.2   | <i>Bacillus amyloliquefaciens</i>               |  |   |
| Glycerophospholipid cholesterol acyltransferase | 2.3.1.43  | <i>Bacillus licheniformis</i>                   | <i>Aeromonas salmonicida</i> subsp. <i>salmonicida</i>                 | Glycerophospholipid cholesterol acyltransferase |
| Hexose oxidase                                  | 1.1.3.5   | <i>Hansenula polymorpha</i> <sup>12</sup>       | <i>Chondrus crispus</i>  | Hexose oxidase                                  |
| Inulinase                                       | 3.2.1.7   | <i>Aspergillus niger</i> <sup>1</sup>           |  |   |
| Lipase, monoacylglycerol                        | 3.1.1.23  | <i>Penicillium camembertii</i>                  |  |   |
| Lipase, triacylglycerol                         | 3.1.1.3   | <i>Aspergillus niger</i> <sup>1</sup>           |  |   |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Candida antarctica</i>  | Lipase, triacylglycerol                         |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Fusarium culmorum</i>   | Lipase, triacylglycerol                         |
|   |           | <i>Aspergillus oryzae</i>                       |  |   |
|   |           | <i>Aspergillus oryzae</i>                       | <i>Fusarium oxysporum</i>  | Lipase, triacylglycerol                         |
|   |           | <i>Aspergillus oryzae</i>                       | <i>Humicola lanuginosa</i> <sup>10</sup>                               | Lipase, triacylglycerol                         |
|   |           | <i>Aspergillus oryzae</i>                       | <i>Rhizomucor miehei</i> <sup>7</sup>                                  | Lipase, triacylglycerol                         |
|   |           | <i>Aspergillus oryzae</i>                       | <i>Humicola lanuginosa</i> <sup>10</sup> and <i>Fusarium oxysporum</i> | Lipase, triacylglycerol                         |
|   |           | <i>Candida rugosa</i>                           |  |   |
|   |           | <i>Hansenula polymorpha</i> <sup>12</sup>       | <i>Fusarium heterosporum</i>   | Lipase, triacylglycerol                         |
|   |           | <i>Mucor javanicus</i> <sup>13</sup>            |  |   |
|   |           | <i>Penicillium roquefortii</i> <sup>14</sup>    |  |   |
|   |           | <i>Rhizomucor miehei</i> <sup>7</sup>           |  |   |
|   |           | <i>Rhizopus arrhizus</i>                        |  |   |
| <i>Rhizopus niveus</i>                          |           |   |  |   |
| <i>Rhizopus oryzae</i>                          |           |   |  |   |
| Lysophospholipase                               | 3.1.1.5   | <i>Aspergillus niger</i> <sup>1</sup>           |  |   |
|   |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus niger</i> <sup>1</sup>                                  | Lysophospholipase                               |
|   |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Aspergillus nishimurae</i>  | Lysophospholipase                               |
| Maltogenic alpha-amylase                        | 3.2.1.133 | <i>Bacillus licheniformis</i>                   | <i>Geobacillus stearothermophilus</i> <sup>2</sup>                     | Maltogenic alpha-amylase                        |



EIGHTH SCHEDULE — *continued*

| Enzyme                               | EC Number | Production organism                                | Donor organism                                     | Donor gene                       |
|--------------------------------------|-----------|--|--|----------------------------------|
|                                      |           | <i>Bacillus subtilis</i>                           | <i>Geobacillus stearothermophilus</i> <sup>2</sup> | Maltogenic alpha-amylase         |
| Maltotetrahydrolase                  | 3.2.1.60  | <i>Bacillus licheniformis</i>                      | <i>Pseudomonas stutzeri</i>                        | Maltotetrahydrolase              |
| Mannan endo-1,4-beta-mannosidase     | 3.2.1.78  | <i>Aspergillus niger</i> <sup>1</sup>              |  |                                  |
|                                      |           | <i>Bacillus amyloliquefaciens</i>                  |  |                                  |
|                                      |           | <i>Bacillus subtilis</i>                           |  |                                  |
|                                      |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup>    |  |                                  |
|                                      |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup>    | <i>Trichoderma longibrachiatum</i> <sup>3</sup>    | Mannan endo-1,4-beta-mannosidase |
| Metalloproteinase <sup>15</sup>      | 3.4.24.4  | <i>Aspergillus oryzae</i>                          |  |                                  |
|                                      |           | <i>Bacillus amyloliquefaciens</i>                  |  |                                  |
|                                      |           | <i>Bacillus amyloliquefaciens</i>                  | <i>Bacillus amyloliquefaciens</i>                  | Metalloproteinase                |
|                                      |           | <i>Bacillus coagulans</i>                          |  |                                  |
|                                      |           | <i>Bacillus subtilis</i>                           |  |                                  |
|                                      |           | <i>Bacillus subtilis</i>                           | <i>Bacillus amyloliquefaciens</i>                  | Metalloproteinase                |
|                                      |           | <i>Geobacillus caldoproteolyticus</i>              |  |                                  |
|                                      |           | <i>Geobacillus stearothermophilus</i> <sup>2</sup> |  |                                  |
| Mucorpepsin (or aspartic proteinase) | 3.4.23.23 | <i>Aspergillus oryzae</i>                          |  |                                  |
|                                      |           | <i>Aspergillus oryzae</i>                          | <i>Rhizomucor miehei</i> <sup>7</sup>              | Aspartic proteinase              |
|                                      |           | <i>Cryphonectria parasitica</i>                    |  |                                  |
|                                      |           | <i>Rhizomucor miehei</i> <sup>7</sup>              |  |                                  |
| Pectin esterase                      | 3.1.1.11  | <i>Aspergillus niger</i> <sup>1</sup>              |  |                                  |
|                                      |           | <i>Aspergillus niger</i> <sup>1</sup>              | <i>Aspergillus niger</i> <sup>1</sup>              | Pectin esterase                  |
|                                      |           | <i>Aspergillus oryzae</i>                          | <i>Aspergillus aculeatus</i>                       | Pectin esterase                  |
| Pectin lyase                         | 4.2.2.10  | <i>Aspergillus niger</i> <sup>1</sup>              |  |                                  |
|                                      |           | <i>Aspergillus niger</i> <sup>1</sup>              | <i>Aspergillus niger</i> <sup>1</sup>              | Pectin lyase                     |
|                                      |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup>    | <i>Aspergillus niger</i> <sup>1</sup>              | Pectin lyase                     |
| Peroxidase                           | 1.11.1.7  | <i>Aspergillus niger</i> <sup>1</sup>              | <i>Marasmius scorodoni</i>                         | Peroxidase                       |

EIGHTH SCHEDULE — *continued*

| Enzyme                               | EC Number | Production organism                             | Donor organism                        | Donor gene                           |
|--------------------------------------|-----------|---|---------------------------------------|--------------------------------------|
| Phosphatidylinositol phospholipase C | 3.1.4.11  | <i>Pseudomonas fluorescens</i>                  | <i>Isolated from soil</i>             | Phosphatidylinositol phospholipase C |
| Phosphodiesterase I                  | 3.1.4.1   | <i>Leptographium procerum</i>                   |                                       |                                      |
| Phospholipase A1                     | 3.1.1.32  | <i>Aspergillus oryzae</i>                       | <i>Fusarium venenatum</i>             | Phospholipase A1                     |
| Phospholipase A2                     | 3.1.1.4   | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Porcine pancreas</i>               | Phospholipase A2                     |
|                                      |           | <i>Streptomyces violaceoruber</i>               |                                       |                                      |
|                                      |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Aspergillus nishimurae</i>         | Phospholipase A2                     |
| Phospholipase C                      | 3.1.4.3   | <i>Pichia pastoris</i>                          | <i>Isolated from soil</i>             | Phospholipase C                      |
| 3-Phytase                            | 3.1.3.8   | <i>Aspergillus niger</i> <sup>1</sup>           |                                       |                                      |
|                                      |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus niger</i> <sup>1</sup> | 3-Phytase                            |
| 4-Phytase                            | 3.1.3.26  | <i>Aspergillus oryzae</i>                       | <i>Peniophora lycii</i>               | 4-Phytase                            |
| Polygalacturonase (pectinase)        | 3.2.1.15  | <i>Aspergillus niger</i> <sup>1</sup>           |                                       |                                      |
|                                      |           | <i>Aspergillus niger</i> <sup>1</sup>           | <i>Aspergillus niger</i> <sup>1</sup> | Polygalacturonase (pectinase)        |
|                                      |           | <i>Aspergillus oryzae</i>                       |                                       |                                      |
|                                      |           | <i>Aspergillus oryzae</i>                       | <i>Aspergillus aculeatus</i>          | Polygalacturonase (pectinase)        |
|                                      |           | <i>Rhizopus oryzae</i>                          |                                       |                                      |
|                                      |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> |                                       |                                      |
| Protein-glutaminase                  | 3.5.1.44  | <i>Chryseobacterium proteolyticum</i>           |                                       |                                      |
| Pullulanase                          | 3.2.1.41  | <i>Bacillus acidopullulyticus</i>               |                                       |                                      |
|                                      |           | <i>Bacillus amyloliquefaciens</i>               |                                       |                                      |
|                                      |           | <i>Bacillus licheniformis</i>                   |                                       |                                      |
|                                      |           | <i>Bacillus licheniformis</i>                   | <i>Bacillus deramificans</i>          | Pullulanase                          |
|                                      |           | <i>Bacillus subtilis</i>                        |                                       |                                      |
|                                      |           | <i>Bacillus subtilis</i>                        | <i>Bacillus acidopullulyticus</i>     | Pullulanase                          |
|                                      |           | <i>Bacillus subtilis</i>                        | <i>Bacillus deramificans</i>          | Pullulanase                          |
|                                      |           | <i>Bacillus subtilis</i>                        | <i>Bacillus naganensis</i>            | Pullulanase                          |
|                                      |           | <i>Klebsiella pneumoniae</i> <sup>16</sup>      |                                       |                                      |
|                                      |           | <i>Pullulanibacillus sp.</i>                    |                                       |                                      |

EIGHTH SCHEDULE — *continued*

| Enzyme                                   | EC Number | Production organism                             | Donor organism                        | Donor gene                               |
|--|-----------|---|---------------------------------------|--|
| Ribonuclease                             | 3.1.26.5  | <i>Penicillium citrinum</i>                     |                                       |  |
| Serine proteinase <sup>17</sup>          | 3.4.21.14 | <i>Aspergillus melleus</i>                      |                                       |  |
|  |           | <i>Aspergillus oryzae</i>                       |                                       |  |
|  |           | <i>Bacillus amyloliquefaciens</i>               |                                       |  |
|  |           | <i>Bacillus halodurans</i>                      |                                       |  |
|  |           | <i>Bacillus licheniformis</i>                   |                                       |  |
|  |           | <i>Bacillus subtilis</i>                        |                                       |  |
| Serine protease (Chymotrypsin)           | 3.4.21.1  | <i>Bacillus licheniformis</i>                   | <i>Nocardioopsis prasina</i>          | Serine protease (Chymotrypsin)           |
| Serine protease with trypsin specificity | 3.4.21.4  | <i>Fusarium venenatum</i>                       | <i>Fusarium oxysporum</i>             | Serine protease with trypsin specificity |
| Tannase                                  | 3.1.1.20  | <i>Aspergillus oryzae</i>                       |                                       |  |
| Transglucosidase                         | 2.4.1.24  | <i>Aspergillus niger</i> <sup>1</sup>           |                                       |  |
|  |           | <i>Trichoderma longibrachiatum</i> <sup>3</sup> | <i>Aspergillus niger</i> <sup>1</sup> | Transglucosidase                         |
| Transglutaminase                         | 2.3.2.13  | <i>Streptomyces mobaraensis</i> <sup>18</sup>   |                                       |  |
| Urease                                   | 3.5.1.5   | <i>Lactobacillus fermentum</i>                  |                                       |  |

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<sup>1</sup> *Aspergillus niger* group includes *A. aculeatus*, *A. awamori*, *A. ficuum*, *A. foetidus*, *A. japonicus*, *A. phoenicis*, *A. saitor* and *A. usamii*.<sup>2</sup> *Geobacillus stearothermophilus* – former name *Bacillus stearothermophilus*.<sup>3</sup> *Trichoderma longibrachiatum* also known as *Trichoderma reesei*.<sup>4</sup> *Kluyveromyces lactis* – former name *Saccharomyces lactis*.<sup>5</sup> *Kluyveromyces marxianus* – former names *Saccharomyces fragilis* and *Kluyveromyces fragilis*.<sup>6</sup> *Rasamsonia emersonii* – former name *Talaromyces emersonii*.<sup>7</sup> *Rhizomucor miehei* – former name *Mucor miehei*.<sup>8</sup> *Micrococcus luteus* – former name *Micrococcus lysodeikticus*.<sup>9</sup> *Paenibacillus macerans* – former name *Bacillus macerans*.<sup>10</sup> *Humicola lanuginosa* also known as *Thermomyces lanuginosus*.<sup>11</sup> *Thermopolyspora flexuosa* – former name *Nonomuraea flexuosa*.<sup>12</sup> *Hansenula polymorpha* also known as *Pichia angusta*.<sup>13</sup> *Mucor javanicus* also known as *Mucor circinelloides* f. *circinelloides*.<sup>14</sup> *Penicillium roquefortii* also known as *Penicillium roqueforti*.<sup>15</sup> Metalloproteinase (EC 3.4.24.4) includes vibriolysin (EC 3.4.24.25), pseudolysin (EC 3.4.24.26), thermolysin (3.4.24.27), bacillolysin (EC 3.4.24.28), aureolysin (EC 3.4.24.29), coccolysin (EC 3.4.24.30), mycolysin (EC 3.4.24.31), beta-lytic metalloendopeptidase (EC 3.4.24.32), deuterolysin (EC 3.4.24.39), serralysin (EC 3.4.24.40).<sup>16</sup> *Klebsiella pneumoniae* – former name *Klebsiella aerogenes*.

EIGHTH SCHEDULE — *continued*<sup>17</sup> Serine proteinase (EC 3.4.21.14) includes oryzin (EC 3.4.21.63) and subtilisin (EC 3.4.21.62).<sup>18</sup> *Streptomyces mobaraensis* – former name *Streptovercillium mobaraense*.*[S 59/2019 wef 01/02/2019]**[S 152/2017 wef 01/04/2017]**[S 816/2014 wef 15/12/2014]**[S 493/2013 wef 01/08/2013]**[S 444/2012 wef 03/09/2012]**[S 195/2011 wef 15/04/2011]**[S 704/2020 wef 31/08/2020]*

## NINTH SCHEDULE

Regulation 30(2) and (5)

## FOOD WITH MAXIMUM AMOUNTS OF PESTICIDES

| <i>Column 1</i><br><i>Substance</i> | <i>Column 2</i><br><i>Maximum<br/>residue limit<br/>(ppm)</i> | <i>Column 3</i><br><i>Type of food</i>  |
|-------------------------------------|---|---|
| Acephate                            | 10  | lettuce   |
|                                     | 5   | tomatoes, cottonseeds,<br>broccoli, cabbages,<br>cauliflowers, kale, Brussels<br>sprouts, citrus fruits |
|                                     | 1   | soya beans  |
|                                     | 0.5   | potatoes  |
|                                     | 0.2   | eggs, edible offal, fat of meat,<br>meat  |
|                                     | 0.1   | milk, nuts  |
| Acifluorfen                         | 0.1   | seed and pod vegetables, rice<br>grain  |
|                                     | 0.5   | nuts  |
|                                     | 0.02  | milk, meat, eggs  |

NINTH SCHEDULE — *continued*

|                     |       |   |
|---------------------|-------|---|
| Alachlor            | 0.01  | wheat, barley, maize, seed and pod vegetables, cabbages, cauliflowers, nuts |
|                     | 0.001 | meat, milk  |
| Aldicarb            | 0.5   | potatoes  |
|                     | 0.2   | strawberries, citrus fruits   |
|                     | 0.1   | coffee beans  |
|                     | 0.05  | cottonseed, maize, onions, nuts   |
|                     | 0.02  | sugar-cane, cereal grain, soya beans  |
|                     | 0.01  | meat  |
| Aluminium phosphide | 0.1   | cereal grain, nuts, coffee beans  |
| Amitraz             | 0.1   | meat, milk and milk products  |
| Asulam              | 0.4   | potatoes  |
|                     | 0.1   | sugar-cane, hops, meat, milk  |
| Atrazine            | 0.1   | citrus fruits, grapes, maize, pineapples, sorghum, sugar-cane, sweet corn   |
|                     | 0.01  | potatoes  |
| Azinphos-methyl     | 4     | kiwi fruit (whole fruit), grapes, peaches                                   |
|                     | 2     | apricot, citrus fruits, celery  |
|                     | 1     | fruits (except as otherwise listed), broccoli, Brussels sprouts             |
|                     | 0.5   | vegetables (except as otherwise listed)                                     |
|                     | 0.4   | kiwi fruits (in edible part)  |
|                     | 0.2   | cereal grains, cottonseeds, potatoes, sunflower seed, soya beans (dry)      |

NINTH SCHEDULE — *continued*

|  |           |   |
|--|-----------|---|
| Azocyclotin (the total residue arising from the use of azocyclotin and/or cyhexatin)                           | 2         | peaches, grapes, apples, strawberries   |
|  | 0.2       | beans   |
|  | 0.1       | egg-plants  |
| Bendiocarb   | 0.1       | mushrooms   |
|  | 0.05      | meat and meat products, wheat, eggs, fat of meat, maize, oats, sugar, beef      |
|  | 0.02      | pome fruit  |
| Benomyl (determined as the sum of benomyl, carbendazim, and 2-aminobenzimidazine and expressed as carbendazim) | 10        | citrus fruits, cherries, apricots   |
|  | 5         | peppers, barley, berry fruits, pome and stone fruits, mangoes, carrots, lettuce |
|  | 3         | avocados, vegetables, potatoes  |
|  | 2         | grapes, mangoes (pulp), rockmelons, beans, celery, plums, gherkins              |
|  | 1         | bananas (whole), mushrooms  |
|  | 0.5       | Brussels sprouts  |
|  | 0.2       | peanuts, water  |
|  | 0.1       | sugar-cane, nuts, eggs (on shell-free basis), onions, asparagus                 |
|  | 0.05      | cereal grains, meat, milk and milk products                                     |
|  | Bromophos | 10  |
| 5  |           | plums   |

NINTH SCHEDULE — *continued*

|          |      |   |
|----------|------|---|
|          | 2    | carrots, lettuce, radishes, spinach, leeks, white flour, wholemeal bread  |
|          | 1    | peaches, currants, cabbages, celery, beans, pears   |
|          | 0.5  | berry fruits, onions, tomatoes, Brussels sprouts  |
|          | 0.1  | peas, cucumbers, cauliflowers, cabbages, broccoli, broad beans (without pod)  |
| Bromacil | 0.04 | citrus fruits, asparagus, pineapples  |
| Captan   | 50   | cherries  |
|          | 25   | pears, apples   |
|          | 20   | black and red currants, potatoes, soya beans, apricots, spinach, strawberries   |
|          | 15   | citrus fruits, plums, tomatoes, peaches   |
|          | 10   | cranberries, cucumbers, lettuce, green beans, peppers, raspberries  |
|          | 5    | raisins   |
| Carbaryl | 100  | clover  |
|          | 20   | wheat bran  |
|          | 10   | apricots, asparagus, avocados, leafy vegetables, blackberries, boysenberries, cherries, nectarines, okra, raw olives, peaches, raspberries, nuts (whole in shell), plums, sorghum (grain) |
|          | 7    | blueberries, citrus fruits, strawberries, cranberries   |

NINTH SCHEDULE — *continued*

|             |     |  |
|-------------|-----|--|
|             | 5   | rambutans, guava, passion fruits, apples, barley, beans, egg-plants, grapes, oats, pears, peas in the pod, pepper, poultry skin, rice in husk, tomatoes, wheat |
|             | 3   | pumpkins, cucumbers, melons  |
|             | 2   | beetroots, carrots, peanuts (whole in shell), radishes, wholemeal flour  |
|             | 1   | cottonseed, sweet corn (kernels), nuts (shelled), olives (processed), cowpeas (processed), sunflowers, kiwi fruits (edible portion)                            |
|             | 0.5 | poultry (total edible portion), eggs (on shell-free basis)   |
|             | 0.2 | potatoes, meat of cattle, goats, sheep and pigs, flour, sugar beets, wheat flour (white)   |
|             | 0.1 | milk, milk product   |
| Carbendazim | 10  | citrus fruits, apricots, cherries, peaches   |
|             | 5   | tomatoes, berry fruits, blackcurrant, carrots, lettuce, peppers  |
|             | 3   | potatoes   |
|             | 2   | apples, pears, celery, dried beans, prunes, gherkins, lima beans, mangoes, plums, nectarines, melon  |
|             | 1   | whole bananas, mushroom, sweet potatoes  |
|             | 0.5 | cucurbits, avocados, banana pulp, barley, Brussels sprouts,  |



NINTH SCHEDULE — *continued*

|   |       |   |
|---|-------|---|
|   |       | cucumbers, egg-plants, oats,<br>rice, rye, wheat  |
|   | 0.2   | chestnuts, soya bean  |
|   | 0.1   | milk, onion, almonds, nuts,<br>asparagus, raw coffee beans,<br>egg (shell-free basis)   |
| Carbofuran and 3-hydroxy<br>carbofuran expressed as<br>carbofuran | 2     | Brussels sprouts  |
|   | 0.5   | cabbages, carrot, potatoes  |
|   | 0.2   | cauliflowers, rice (hulled),<br>soya beans  |
|   | 0.1   | oats, oil seeds, onions,<br>peaches, nuts, pears, wheat,<br>bananas, barley, mustard<br>seeds, raw coffee beans, egg-<br>plants, lettuce, maize,<br>strawberries, sugar-cane,<br>sweet corn, tomatoes |
|   | 0.05  | meat and meat products, fat of<br>meat, milk  |
| Chlordane (sum of cis and<br>trans chlordane and<br>oxychlordane) | 0.05  | fat of meat, fish, crude linseed<br>oil, crude cottonseed oil, crude<br>soya bean oil   |
|   | 0.02  | vegetables, eggs, fruits, edible<br>cottonseed oil, edible soya<br>bean oil, pineapples, cereal<br>grain  |
|   | 0.002 | milk and milk products  |
| Chlorfenvinphos   | 0.4   | carrots, celery   |
|   | 0.2   | fat of meat   |
|   | 0.1   | cauliflowers, radishes,<br>horseradish, tomatoes  |
|   | 0.05  | Brussels sprouts, cabbages,<br>broccoli, turnips, sweet   |

NINTH SCHEDULE — *continued*

|                |       |   |
|----------------|-------|---|
|                |       | potatoes, onions, leeks, egg-plants, mushrooms, nuts (shell-free basis), maize, wheat, cottonseeds, rice, potatoes                            |
|                | 0.008 | milk and milk products  |
| Chlormequat    | 5     | wheat, rye, oats  |
|                | 3     | pears   |
|                | 1     | raisin and other dried vine fruit, grapes   |
|                | 0.1   | milk and milk products  |
| Chlorothalonil | 25    | peaches, currants   |
|                | 10    | celery, cherries, berry fruits, kale, lettuce head, peppers   |
|                | 7     | vegetables (except celery and potatoes), apricots, plums, beans (in pods), citrus fruits, cucumbers, grapes, melons, onion, pumpkin, tomatoes |
|                | 1     | carrot, sweet corn  |
|                | 0.5   | lima beans  |
|                | 0.2   | peanuts (whole), bananas (whole), cereal grains   |
|                | 0.1   | potatoes, peanuts (kernel)  |
| Chlorpropham   | 50    | potatoes  |
| Chlorpyrifos   | 2     | fat of meat, dried fruit, kiwi fruits   |
|                | 1     | apples, cabbage, grapes, kale   |
|                | 0.5   | carrots, peppers, tomatoes, pears   |
|                | 0.3   | citrus fruits   |
|                | 0.2   | beans, egg-plants, berry fruits, fat of meat (other than poultry)   |

NINTH SCHEDULE — *continued*

|   |      |   |
|---|------|---|
|   | 0.1  | lettuce, fat of poultry, rice in the husk   |
|   | 0.05 | oil seeds, crude cottonseed oil, cauliflowers, celery, eggs (shell-free basis), mushrooms, onions, potatoes, cabbages |
|   | 0.01 | milk and milk products (on a fat basis)   |
| Chlorpyrifosmethyl  | 20   | bran  |
|   | 10   | maize, sorghum and wheat  |
|   | 2    | flour, bread (wholemeal)  |
|   | 0.5  | apples, peaches, tomatoes, white bread  |
|   | 0.1  | beans, cabbages, egg-plants, lettuce, pepper, radishes, rice, green tea   |
|   | 0.05 | fat of meat, eggs, meat and meat products   |
|   | 0.01 | milk and milk products  |
| Coumaphos   | 1    | fat of cattle and poultry   |
|   | 0.5  | fat of sheep, pigs and goats  |
|   | 0.05 | eggs  |
|   | 0.02 | milk and milk products  |
| Cyhexatin (defined as the sum of cyhexatin and dicyclohexyltin oxide, expressed as cyhexatin) | 5    | kiwi fruits, peaches  |
|   | 3    | strawberries, blackcurrants   |
|   | 2    | apples, pears, citrus fruits, bananas, berry fruit, vegetables, plums, tea (dry manufactured)                         |
|   | 1.0  | beans, gherkins   |
|   | 0.5  | cucumbers, melons   |

NINTH SCHEDULE — *continued*

|                               |      |   |
|-------------------------------|------|---|
|                               | 0.2  | meat  |
|                               | 0.05 | milk and milk products  |
| Cypermethrin (sum of isomers) | 2    | lettuce, citrus fruits, nectarines, peaches, spinach, pome fruits   |
|                               | 1    | cherries, grapes, plums, leafy vegetables, brassicas  |
|                               | 0.5  | tomatoes, barley, currants, edible vegetable oil, berry fruits, kidney beans in pod, leeks, pepper                          |
|                               | 0.2  | meat, fat of meat, cucumbers, egg-plants, oilseed, wheat  |
|                               | 0.1  | onions  |
|                               | 0.05 | soya beans, sweet corn, maize, peas, coffee beans, eggs, kidney bean without pod, mushroom, meat, root and tuber vegetables |
|                               | 0.02 | peanuts   |
|                               | 0.01 | milk, potatoes  |
| 2,4-D                         | 2    | citrus fruits   |
|                               | 2    | edible offal of cattle, pigs, sheep and goats   |
|                               | 0.5  | barley, rye, wheat  |
|                               | 0.2  | other cereal grains, potatoes   |
|                               | 0.1  | blackberries, raspberries and other berries   |
|                               | 0.05 | eggs, meat, milk and milk products  |
| Deltamethrin                  | 10   | tea   |
|                               | 5    | wheat bran (unprocessed)  |

NINTH SCHEDULE — *continued*

|  |      |  |
|--|------|--|
|  | 2    | cereal grains (whole grain), wheat flour (wholemeal), coffee beans   |
|  | 0.5  | white wheat flour  |
|  | 0.2  | leafy vegetables   |
|  | 0.1  | oil seeds, pome fruits, legumes and bulb vegetables  |
|  | 0.05 | brassica leaves, vegetables, edible peel, bananas, cocoa beans, grapes, kiwi fruits, stone fruits, oranges, strawberries |
|  | 0.01 | melons, mushrooms, pineapples, root and tuber vegetables   |
| Demeton (including demeton-O, demeton-S, demeton-O-methyl, demeton-S-methyl and oxydemeton-S methyl) | 1    | apricots, grapes, peaches  |
|  | 0.5  | apples, citrus fruits, pears, cereal grains, tomatoes, lettuce, celery, egg-plants, cabbages, cauliflowers               |
|  | 0.2  | plums  |
|  | 0.1  | melons, strawberries   |
| Diazinon   | 2    | olives (unprocessed), olive oil  |
|  | 0.7  | peaches, citrus fruits, leafy vegetables, fat of meat, sweet corn  |
|  | 0.5  | all other fruits, kiwi fruits, other vegetables  |
|  | 0.1  | almonds, barley, cottonseed, nuts, polished rice, safflower seeds, raw cereals, sunflower seeds                          |

NINTH SCHEDULE — *continued*

|   |      |  |
|---|------|--|
|   | 0.02 | milk   |
| Dichlorvos                                  | 5    | cocoa beans  |
|   | 2    | raw cereals, coffee beans (green), soya beans, peanuts, lentils, nuts  |
|   | 1    | lettuce  |
|   | 0.5  | milled cereal products, mushrooms, tomatoes, vegetables (except lettuce)   |
|   | 0.1  | fruit and miscellaneous food items not otherwise specified (e.g. bread, cakes, cooked meats, etc.)                                       |
|   | 0.05 | eggs (shell-free basis), meat, poultry   |
|   | 0.02 | milk   |
| Dicofol                                     | 5    | almonds, fruits (except strawberries), vegetables (except cucumbers, gherkins, tomatoes), hops (dried), tea (dry manufactured)           |
|   | 2    | cucumbers, gherkins  |
|   | 1    | strawberries, tomatoes   |
|   | 0.1  | cottonseeds  |
| Dimethoate (including its oxygen analogues) | 2    | vegetables (except as otherwise listed), apples, apricots, cherries, citrus fruits, blackcurrants, grapes, peaches, pears, plums, olives |
|   | 1    | tomatoes, peppers, strawberries  |
|   | 0.05 | potatoes   |
| Dinocap                                     | 0.1  | grapes, pome and stone fruits, strawberries, cucumbers   |
| Diphenylamine                               | 5    | apples, pears  |

NINTH SCHEDULE — *continued*

|  |      |   |
|--|------|---|
| Diquat   | 5    | barley, rice (in husk), wheat bran  |
|  | 2    | rapeseeds, sorghum grains, wheat, wholemeal wheat flour   |
|  | 1    | cottonseeds   |
|  | 0.5  | beans, sunflower seeds  |
|  | 0.2  | potatoes, white wheat flour, rice (husked or polished)  |
|  | 0.1  | onions, maize, sugarbeet, peas, cottonseed oil, rapeseed oil, sesame seed oil, sunflower seed oil |
|  | 0.05 | vegetables, meat and meat products  |
|  | 0.01 | milk  |
| Disulfoton (as demeton)  | 0.5  | maize, vegetables, rice (in husk), potatoes   |
|  | 0.2  | cereal grains   |
| Dithiocarbamates<br>(expressed as CS <sub>2</sub> and referred separately to the residues arising from any or each of the following groups of dithiocarbamates): | 5    | grapes, celery, currants, bulbs   |
|  | 3    | apples, peaches, pears, strawberries, tomatoes  |
|  | 2    | brassicas and other leafy vegetables, beans   |
|  | 1    | bananas, cherries, plums, lettuce   |
| (a) Dimethyl,<br>dithiocarbamates<br>resulting from the use  | 0.5  | cereal grain, carrots, beans, cucumber  |

NINTH SCHEDULE — *continued*

|  |      |  |
|--|------|--|
| of ferbam, thiram or ziram   |      |  |
|  | 0.1  | potatoes   |
| (b) Ethylenebisdithiocarbamates (resulting from the use of mancozeb, maneb or zinb) and excluding propineb | 2    | asparagus  |
| Dodine   | 5    | apples, peaches, grapes, pears, strawberries                               |
|  | 2    | cherries   |
| EDB (ethylene dibromide)   | 0.1  | fruits, vegetables   |
| Ethylene oxide   | 50   | whole spices   |
| Endosulfan (including endosulfan sulphate)   | 30   | tea (dry manufactured)   |
|  | 2    | vegetables (except carrots, potatoes, sweet potatoes, onions), fruits      |
|  | 1    | cottonseed   |
|  | 0.5  | cottonseed oil (crude)   |
|  | 0.2  | fat of meat, carrots, potatoes, sweet potatoes, onions (bulb)              |
|  | 0.1  | rice (in husk)   |
|  | 0.02 | milk and milk products   |
| Ethion   | 5    | tea (dry manufactured)   |
|  | 2.5  | fat of meat of cattle  |
|  | 2    | grapes, apples, beans, citrus fruits, pears, strawberries, plums, tomatoes |
|  | 1    | egg-plants, garlic, nectarines, onions, peaches, peppers                   |
|  | 0.5  | cottonseed, cucumbers  |



NINTH SCHEDULE — *continued*

|                  |      |  |
|------------------|------|--|
|                  | 0.2  | eggs, fat of meat (other than cattle)  |
|                  | 0.1  | almonds, apricots, cherries, nuts  |
|                  | 0.05 | maize  |
|                  | 0.02 | milk   |
| Ethoxyquin       | 3    | apples, pears  |
| Fenamiphos       | 0.5  | oranges (whole)  |
|                  | 0.2  | carrots, lettuce   |
|                  | 0.1  | sweet potatoes, potatoes, roasted coffee beans, orange flesh   |
|                  | 0.05 | sugar-cane, peanuts, tomatoes, leafy vegetables (except lettuce), pineapples, grapes, bananas, celery, onions, other citrus fruits |
| Fenbutatin-oxide | 5    | citrus fruits, bananas, cherries, apples, grapes, pears  |
|                  | 3    | pome fruits, peaches, strawberries, plums  |
|                  | 1    | cucumber, egg-plant, gherkin, melons, tomatoes   |
|                  | 0.02 | milk   |
| Fenitrothion     | 20   | raw wheat bran, raw rice bran  |
|                  | 10   | cereal grains  |
|                  | 1    | peaches, polished rice, white wheat flour  |
|                  | 2    | processed wheat bran, citrus fruits, apples, cherries, grapes, lettuce   |
|                  | 0.5  | cabbages, pears, peas, tomatoes, dried green tea, strawberries   |

NINTH SCHEDULE — *continued*

|             |       |   |
|-------------|-------|---|
|             | 0.2   | white bread, leeks, radishes  |
|             | 0.1   | cocoa beans, nuts, other fruits and vegetables, peppers, dried soya beans   |
|             | 0.05  | cucumbers, fat of meat, onions  |
|             | 0.002 | milk  |
| Fenthion    | 2     | citrus fruits, berry fruits, pome and stone fruits, figs, grapes, persimmons, passionfruit, guava, cherries, lettuce, peaches, pears, fat of meat   |
|             | 1     | bananas, cabbages, cauliflowers, olive oil, olives, plums   |
|             | 0.5   | peas, tomatoes  |
|             | 0.2   | citrus juice  |
|             | 0.1   | beans, onions, rice, sweet potatoes, wheat  |
|             | 0.05  | milk, potatoes  |
| Fentin      | 1     | celery  |
|             | 0.2   | sugarbeets, carrots   |
|             | 0.1   | potatoes, celery, cocoa beans, raw coffee beans, rice (in husk)   |
|             | 0.05  | peanuts and pecans (shell-free basis)   |
| Fenvalerate | 5     | raw cereal (whole grain), wheat bran, kiwi fruits, peaches, wholemeal flour, wholemeal bread, celery, brassicas, leafy vegetables, cherries, citrus fruits, lettuce, berry fruits, tomatoes, meat fat |
|             | 1     | berry fruits, whole green beans, tomatoes, meat fat   |
|             | 0.5   | dried beans, watermelons  |

NINTH SCHEDULE — *continued*

|  |                |  |
|--|----------------|--|
|  | 0.2            | cottonseed, cucumbers,<br>melons, nuts, flour                                  |
|  | 0.1            | cottonseed oil, peanuts<br>(whole), soya beans,<br>sunflower seeds, sweet corn |
|  | 0.05           | root and tuber vegetables  |
|  | 0.01           | milk   |
| Folpet   | 30             | currants (fresh)   |
|  | 25             | grapes, blueberries  |
|  | 20             | strawberries   |
|  | 15             | cherries, lettuce, raspberries   |
|  | 10             | apples, citrus fruits  |
|  | 5              | tomatoes   |
|  | 2              | cucumbers, onions,<br>watermelons  |
| Hydrogen cyanide   | 75<br>(as HCN) | raw cereals  |
|  | 6<br>(as HCN)  | flour  |
| Imazalil   | 5              | citrus fruits (whole)  |
|  | 0.5            | cucumbers, gherkins  |
|  | 0.2            | banana pulp  |
|  | 0.1            | citrus fruits (without peel)   |
|  | 0.01           | wheat grain  |
| Inorganic bromide (total<br>bromide ion from all<br>sources) | 400            | spices, herbs  |
|  | 250            | dried figs   |
|  | 100            | cabbages, lettuce, dried dates,<br>raisins, sultanas, currants                 |
|  | 75             | avocados, tomatoes   |

NINTH SCHEDULE — *continued*

|                  |      |   |
|------------------|------|---|
|                  | 50   | raw cereals, dried peaches, wholemeal flour, capsicums, cucumbers, celery   |
|                  | 30   | strawberries, citrus fruits, all other dried fruits (except dried prunes)   |
|                  | 20   | dried prunes, all other fruits, vegetables  |
| Iprodione        | 10   | grapes, apples, peaches, pears, plums, berry fruits   |
|                  | 5    | blackcurrants, lettuce, cucumbers, kiwi fruits, raspberries, tomatoes   |
|                  | 3    | rice (husked and unpolished)  |
|                  | 1    | rapeseeds, chicory  |
|                  | 0.2  | dry beans   |
|                  | 0.1  | garlic and onions   |
| Isofenphos       | 0.02 | animal fats, meat, maize  |
|                  | 0.01 | milk  |
| Malathion        | 20   | unprocessed wheat or rice bran  |
|                  | 8    | beans (dried), blackberries, cabbages, cereal grains, fruits (dried), grapes, lentils, lettuce, nuts (whole in shell), raspberries, spinach |
|                  | 6    | cherries, peaches, plums  |
|                  | 5    | broccoli  |
|                  | 4    | citrus fruits   |
|                  | 3    | tomatoes, turnip, kale and other leafy vegetables   |
|                  | 2    | apples, green beans, wholemeal and flour from rye and wheat   |
| Maleic hydrazide | 50   | potatoes  |

NINTH SCHEDULE — *continued*

|                                    |      |  |
|------------------------------------|------|--|
|                                    | 15   | onions   |
| Mancozeb (see<br>dithiocarbamates) |      |  |
| Maneb (see<br>dithiocarbamates)    |      |  |
| Metalaxyl                          | 2    | lettuce  |
|                                    | 1    | grapes, citrus fruits, spinach   |
|                                    | 0.5  | avocados, broccoli, cabbages,<br>cauliflowers, cucumbers,<br>gherkins, tomatoes  |
|                                    | 0.2  | melons, watermelons  |
|                                    | 0.1  | potatoes   |
|                                    | 0.05 | cereal grains, onions, peas,<br>sugarbeets, sunflower seeds  |
| Methamidophos                      | 2    | tomatoes, bulbs  |
|                                    | 1    | broccoli, Brussels sprouts,<br>cabbages, brassicas, and other<br>leafy vegetables, cauliflowers,<br>celery, egg-plants, lettuce,<br>peaches, peppers |
|                                    | 0.5  | citrus fruits, cucumbers   |
|                                    | 0.1  | cottonseed, potatoes, rapeseed   |
|                                    | 0.05 | soya beans (dried)   |
| Methidathion                       | 5    | mandarins  |
|                                    | 2    | citrus fruits (excluding<br>mandarins)   |
|                                    | 1    | crude cottonseed oil   |
|                                    | 0.2  | apples, pears, passion fruits,<br>apricots, cabbages,<br>cauliflowers, cherries, grapes,<br>leafy vegetables, nectarines,<br>peaches, plums          |
|                                    | 0.1  | beans, maize, peas, mangoes  |

NINTH SCHEDULE — *continued*

|               |       |   |
|---------------|-------|---|
|               | 0.02  | animal fats, animal meat, eggs<br>(shell-free basis)                      |
| Methiocarb    | 0.1   | vegetables  |
|               | 0.05  | citrus fruits, maize, meat, eggs,<br>sweet corn                           |
| Methomyl      | 5     | peas, lettuce, cabbages, kale,<br>apples, nectarines, peaches,<br>spinach |
|               | 3     | celery  |
|               | 2     | asparagus, citrus fruits,<br>cherries, grapes                             |
|               | 1     | tomatoes  |
|               | 0.5   | cucumbers, egg-plants   |
|               | 0.2   | leafy vegetables  |
|               | 0.1   | potatoes  |
|               | 0.02  | milk, meat  |
| Monocrotophos | 0.5   | apples, pears, tomatoes,<br>bananas                                       |
|               | 0.2   | beans, Brussels sprouts,<br>cabbages, cauliflowers, citrus<br>fruits      |
|               | 0.1   | raw coffee beans, cottonseeds,<br>onions, peas                            |
|               | 0.05  | edible vegetable oil, potatoes,<br>carrots, maize, soya beans,<br>turnips |
|               | 0.02  | meat, eggs (shell-free basis)   |
|               | 0.002 | milk  |
| Oxamyl        | 3     | celery, citrus fruits, peppers  |
|               | 2     | apples, melons, tomatoes  |
|               | 1     | pineapples  |
|               | 0.5   | cucumbers   |

NINTH SCHEDULE — *continued*

|                            |      |  |
|----------------------------|------|--|
|                            | 0.2  | cottonseed, bananas  |
|                            | 0.1  | beets, carrots, coffee beans, peanuts, potatoes, sugar beets, soya beans (dried), sweet potatoes                     |
|                            | 0.05 | dried kidney beans, onions, maize  |
| Paraquat                   | 10   | rice (in husk)   |
|                            | 2    | sunflower seeds  |
|                            | 1    | olives (fresh)   |
|                            | 0.5  | rice (polished), sorghum, kidneys (pigs and sheep)   |
|                            | 0.2  | cottonseed, potatoes, dried hops, passion fruits   |
|                            | 0.1  | maize, soya beans  |
|                            | 0.05 | vegetables, fruits, sugar-canes, nuts, raw cereals (other than rice and maize), meat and meat products, coffee beans |
|                            | 0.01 | milk, eggs   |
| Parathion                  | 1    | peaches, apricots, citrus fruit  |
|                            | 0.7  | vegetables (except carrots)  |
|                            | 0.5  | all other fruits, raw cereals, carrots   |
| Permethrin (total isomers) | 10   | wheat bran   |
|                            | 5    | lettuce, celery, cabbages, kale, spring onions   |
|                            | 2    | pome and stone fruits, wheat flour, kiwi fruits, cereal grains, broccoli, currants, grapes, tomatoes                 |
|                            | 1    | berry fruits, egg-plants, olives, peppers, sunflower seeds, meat fat, meat, beans with pods,                         |

NINTH SCHEDULE — *continued*

|              |      |  |
|--------------|------|--|
|              |      | asparagus, Brussels sprouts,<br>sunflower seed oil   |
|              | 0.5  | flour, bread, green beans,<br>cauliflowers, citrus fruits,<br>cottonseeds, cucumbers,<br>gherkins, radishes, leeks   |
|              | 0.1  | dry beans, almonds, carrots,<br>cottonseed oil, eggs, melons,<br>legume oil seed, soya bean oil,<br>mushrooms, peas, meat, meat<br>fat                     |
|              | 0.05 | sweet corn, milk and milk<br>products (fat basis), potatoes,<br>coffee beans, rapeseeds,<br>sugarbeets   |
| Phosphomidon | 0.5  | apples, pears  |
|              | 0.4  | citrus fruits  |
|              | 0.2  | beans, broccoli, Brussels<br>sprouts, cabbages, carrots,<br>cherries, cauliflowers, kale,<br>green peppers, peaches, peas,<br>plums, spinach, strawberries |
|              | 0.1  | cereal grains, cucumbers,<br>lettuce, tomatoes, watermelons  |
|              | 0.05 | root vegetables (includes<br>potatoes)   |
| Phorate      | 0.5  | carrots  |
|              | 0.1  | beans, cowpeas, egg-plants,<br>rapeseed, tomatoes  |
|              | 0.2  | lettuce  |
|              | 0.05 | barley, meat, eggs (shell-free<br>basis), grapes, milk, peanuts<br>(shell-free basis), wheat,<br>potatoes  |
| Phosalone    | 5    | apples, peaches, cherries,<br>grapes, plums  |



NINTH SCHEDULE — *continued*

|                    |      |   |
|--------------------|------|---|
|                    | 2    | pears, broccoli, strawberries, tomatoes, Brussels sprouts, cabbages, citrus fruits, cucumbers, lettuce, peas  |
|                    | 0.5  | fat of meat of sheep and goats  |
|                    | 0.1  | potatoes  |
| Phosmet            | 15   | kiwi fruits (whole fruit)   |
|                    | 10   | apples, berry fruits, grapes, peaches, pears, sweet potatoes (after washing)  |
|                    | 5    | nectarines, citrus fruits, forage crops (dry)   |
|                    | 1    | fat of meat of cattle   |
|                    | 0.2  | maize (kernel and cobs husk removed)  |
|                    | 0.1  | meat of pigs, peas  |
|                    | 0.05 | potatoes  |
|                    | 0.02 | milk  |
| Picloram           | 0.2  | raw cereals   |
|                    | 0.05 | milk and milk products, meat  |
| Piperonyl butoxide | 20   | cereal grains, dried fish   |
|                    | 8    | fruits, vegetables, nuts, oil seeds, dried fruits, dried vegetables   |
|                    | 0.1  | meat and meat products  |
| Primicarb          | 1    | apples, beans, broccoli, Brussels sprouts, cabbages, cauliflowers, celery, egg-plants, gherkins, lettuce, parsley, pome fruits, spinach, tomatoes, watercress |
|                    | 0.5  | currants, leeks, onion, oranges, peaches, plums, berry fruits   |
|                    | 0.2  | rapeseed  |

NINTH SCHEDULE — *continued*

|  |      |  |
|--|------|--|
|  | 0.05 | barleys, beet roots, citrus fruits, cottonseeds, eggs (shell-free basis), meat, milk, oats, pecans, potatoes, radishes, sugarbeets, sweet corn, turnips, wheat |
| Pirimiphos-methyl                                | 20   | bran   |
|  | 10   | cereal grains, peanut oil  |
|  | 5    | wholemeal flour (wheat or rye), peanut kernels, mushrooms, olives  |
|  | 2    | apples, Brussels sprouts, rice (hulled), wheat flour (white), kiwi fruits, cabbages, cauliflowers, cherries, pears, plums                                      |
|  | 1    | wholemeal bread, rice (polished), carrots, cucumbers, currants, berry fruits, spring onions, peppers, tomatoes   |
|  | 0.5  | bread, beans in pods, whole citrus fruits, dates   |
|  | 0.05 | meat, poultry, milk, eggs, peas, potatoes  |
| Prochloraz (determined as 2,4,6-trichlorophenol) | 5    | avocados, bananas, citrus fruits   |
|  | 2    | mushrooms, mangoes   |
|  | 1    | papayas, stone fruits  |
|  | 0.5  | rapeseed   |
|  | 0.05 | oats, barleys, wheat, rye  |
| Propargite                                       | 10   | grapes, cranberries, raisins   |
|  | 7    | apricots, peaches, nectarines, plums, strawberries   |
|  | 5    | citrus fruits  |

NINTH SCHEDULE — *continued*

|               |      |  |
|---------------|------|--|
|               | 3    | apples, bananas, pears, stone fruits, passion fruits   |
|               | 0.1  | corn grains, eggs, cottonseeds, almonds, meat, meat fat, nuts  |
|               | 0.08 | milk   |
| Pyrethrins    | 3    | cereal grains, fish (dried)  |
|               | 1    | fruits, vegetables, nuts, oil seeds, dried fruits, dried vegetables  |
| Quintozene    | 1    | bananas (whole)  |
|               | 0.3  | lettuce, peanuts, celery   |
|               | 0.2  | navy beans, potatoes, onions   |
|               | 0.1  | tomatoes   |
|               | 0.03 | cottonseeds  |
|               | 0.02 | broccoli, cabbages   |
|               | 0.01 | beans, peppers, bananas (pulp)   |
| Thiabendazole | 10   | apples, pears, citrus fruits   |
|               | 5    | potatoes (washed before analysis)  |
|               | 3    | bananas (whole fruit), strawberries  |
|               | 2    | tomatoes   |
|               | 0.5  | mushrooms  |
|               | 0.4  | bananas (pulp)   |
|               | 0.2  | cereal grains  |
|               | 0.1  | meat, onions   |
|               | 0.05 | milk   |
| Thiometon     | 1    | fruits, raw cereals, vegetables  |
|               | 0.5  | apples, apricots, beans, cabbages, celery, cherries, chicory, egg-plants, grapes, lettuce, parsley, peaches, |

NINTH SCHEDULE — *continued*

|                    |      |  |
|--------------------|------|--|
|                    |      | peanuts (whole), pears, peas (in pods), peppers, plums, strawberries, tomatoes                                 |
|                    | 0.1  | cottonseed   |
|                    | 0.05 | carrots, cereal grains, mustard seed, potatoes, rapeseed, sugarbeets   |
| Thiophanate-methyl | 10   | apricots, cherries, citrus fruits, grapes, peaches   |
|                    | 5    | apples, carrots, currants, berry fruits, celery, lettuce, pears, tomatoes                                      |
|                    | 2    | beans, gherkins, plums   |
|                    | 1    | bananas, mushrooms   |
|                    | 0.5  | cucumbers  |
|                    | 0.1  | cereal grains, chicken fat and meat, onions, sugarbeets  |
| Thiram             | 7    | apples, bananas (whole), celery, onion bulbs, peaches, strawberries, tomatoes                                  |
| Triadimefon        | 1    | grapes, currants   |
|                    | 0.5  | apples, melons, paprikas, pome fruits, tomatoes  |
|                    | 0.2  | berry fruits, cucumbers, wheat   |
|                    | 0.1  | eggs, milk, barley, meat, coffee beans, oats, spring onions, peas, pumpkins, sugarbeets                        |
| Trichlorfon        | 0.2  | grain legumes, bananas, peaches, Brussels sprouts, cauliflowers, kale, sweet corn, celery, beetroots, tomatoes |
|                    | 0.1  | oil seeds, meat, fat of meat, nuts (on shell-free basis), beans, turnips, peanuts, raw                         |

NINTH SCHEDULE — *continued*

|                              |      |   |
|------------------------------|------|---|
|                              |      | cereals, radishes, fruits (except bananas, peaches and dried fruits), vegetables (except Brussels sprouts, cauliflowers, kale, sweet corns, celery, beetroots), cherries, citrus fruits, cottonseed, peas, mustard greens, pumpkins |
|                              | 0.05 | milk, sugar-cane, carrots, egg-plants, sugarbeets, parsley  |
| Triforine                    | 5    | peaches   |
|                              | 2    | apples, plums, cherries   |
|                              | 1    | beans, berry fruits, currants   |
|                              | 0.5  | tomatoes  |
|                              | 0.2  | Brussels sprouts  |
|                              | 0.1  | cereal grains   |
| Vamidothion                  | 1    | apples, peaches, pears, Brussels sprouts  |
|                              | 0.5  | sugarbeets, grapes  |
| Zeranol                      | 0.02 | meat of cattle and sheep  |
| Zineb (see dithiocarbamates) |      |   |
| Ziram                        | 7    | fruits, vegetables.   |

*[S 146/2018 wef 28/03/2018]*

*[S 152/2017 wef 01/04/2017]*

*[S 59/2019 wef 01/02/2019]*

## TENTH SCHEDULE

Regulation 31(1)

## MAXIMUM AMOUNTS OF ARSENIC AND LEAD PERMITTED IN FOOD

No article of food specified in the first column of the following table shall contain more than the amounts of the substances specified, in parts per million, in the second and third columns respectively:

| <i>Type of Food</i>  | <i>Arsenic<br/>(As)</i> | <i>Lead<br/>(Pb)</i> |
|--|-------------------------|----------------------|
| <i>(a) Beverages —</i>   |                         |                      |
| (1) Ale, beer, cider, perry, porter, stout   | 0.2                     | 0.2                  |
| (2) Brandy, gin, rum, whisky and other alcoholic liquor and Chinese wine exceeding 40.0% v/v alcohol at 20°C | 0.2                     | 0.2                  |
| (3) Wine, Chinese wine, liqueur, alcoholic cordial or cocktail   | 0.2                     | 0.2                  |
| (4) Alcoholic liquor not otherwise specified   | 0.2                     | 0.2                  |
| (5) Concentrated soft drinks intended for consumption after dilution   | 0.5                     | 1                    |
| (6) Concentrates used in the manufacture of soft drinks  | 0.5                     | 2                    |
| (7) Fruit and vegetable juice, not including lime and lemon juice  | 0.2                     | 0.3                  |
| (8) Lime and lemon juice   | 0.2                     | 1                    |
| (9) Beverages not specified above  | 0.1                     | 0.2                  |
| <i>(b) Other Food —</i>  |                         |                      |
| (1) Baking powder, Cream of Tartar   | 2                       | 2                    |
| (2) Canned fish and meat, meat extract and hydrolysed protein  | 1                       | 2                    |
| (3) Caramel  | 5                       | 5                    |
| (4) Chemicals used as ingredients or in the processing or preparation of food —                              |                         |                      |

TENTH SCHEDULE — *continued*

| (a) For which the B.P. or B.P.C. specifies a limit         | Current B.P. or B.P.C. Limit | Current B.P. or B.P.C. Limit                       |
|--|------------------------------|--|
| (b) Other chemicals  | 2                            | 10   |
| (5) Chicory, dried or roasted                              | 1                            | 2  |
| (6) Cocoa powder (calculated on dry, fat-free substance)   | 1                            | 2  |
| (7) Coffee beans   | 1                            | 2  |
| (8) Colouring matter —                                     |                              |  |
| (a) Part I — Synthetic Organic Colours                     | 3                            | 10   |
| (b) Part II — Other Colours (on dry matter) except caramel | 5                            | 20   |
| (9) Curry powder   | 1                            | 2  |
| (10) Dried herbs and spices (including mustard)            | 1.5                          | 2  |
| (11) Dried or dehydrated vegetables                        | 1                            | 2  |
| (12) Edible gelatin  | 2                            | 2  |
| (13) Edible oils and fats                                  | 0.1                          | 0.1  |
| (14) Eggs, preserved or salted                             | 1                            | 2  |
| (15) Fish, crustaceans and molluscs                        | 1                            | 2  |
| (16) Flavourings   | 1                            | 1.5  |
| (17) Fresh fruits and vegetables                           | 1                            | 1  |
| (18) Fruits, fruit products and vegetables in tins         | 1                            | 1  |
| (19) Ice-cream, ice lollies and similar frozen confections | 0.5                          | 0.5  |
| (20) Infant formula  | 0.1                          | 0.01<br>(applicable to infant formula as consumed) |
| (20A) Baby food  | 0.1                          | 0.2  |

TENTH SCHEDULE — *continued*

|   |     |     |
|---|-----|-----|
| (21) Milk and milk products in tins   | 0.1 | 0.3 |
| (22) Pickles  | 1   | 2   |
| (23) Sugar —  |     |     |
| (a) Refined white sugar (sulphated ash not more than 0.03%) and anhydrous dextrose and dextrose monohydrate | 1   | 0.5 |
| (b) Others (including sugar syrups)   | 1   | 2   |
| (24) Tea  | 1   | 2   |
| (25) Tomato ketchup and other sauces  | 1   | 2   |
| (26) Tomato puree, paste or powder containing 25% or more total solids                                      | 2   | 2   |
| (27) Other food not specified above   | 1   | 2   |

[S 59/2019 wef 01/02/2019]

[S 152/2017 wef 01/04/2017]

## ELEVENTH SCHEDULE

Regulation 35

MICROBIOLOGICAL STANDARDS FOR  
READY-TO-EAT FOOD

## PART 1

## ENTEROBACTERIACEAE AND ESCHERICHIA COLI

1. The amount of Enterobacteriaceae (including *Escherichia coli* of any strain) detected in any ready-to-eat food, other than the ready-to-eat food mentioned in paragraph 2, must be less than 10,000 colony forming units per gram (for solid food) or millilitre (for liquid food).

2. Paragraph 1 does not apply to any ready-to-eat food —

(a) that is fresh fruit, fresh vegetable or ripened cheese; or

(b) that contains as an ingredient one or more of the ready-to-eat food mentioned in sub-paragraph (a).



ELEVENTH SCHEDULE — *continued*

3. The amount of *Escherichia coli* of any strain detected in any ready-to-eat food must be less than 100 colony forming units per gram (for solid food) or millilitre (for liquid food).

## PART 2

## PATHOGENS

1. The amount of pathogen of the type specified in the first column of the following table that is detected in any ready-to-eat food must be less than the number of colony forming units specified for that pathogen in the second column of the table:

| <i>Pathogen</i>                                 | <i>Colony forming units per gram (for solid food) or millilitre (for liquid food)</i> |
|---|---|
| <i>Bacillus cereus</i>                          | 200   |
| <i>Clostridium perfringens</i>                  | 100   |
| Coagulase-positive <i>Staphylococcus aureus</i> | 100   |

2. Where any ready-to-eat food is a type of ready-to-eat raw seafood, the amount of *Vibrio parahaemolyticus* detected in the ready-to-eat food must be less than 100 colony forming units per gram (for solid food) or millilitre (for liquid food).

3. Any pathogen not mentioned in paragraph 1 or 2 (whether common, or introduced in any way, to the ready-to-eat food) must not be detected in any ready-to-eat food.

[S 237/2020 wef 03/04/2020]

## TWELFTH SCHEDULE

Regulations 8A(1), 9B(1)(c) and (2)(c),  
79(2), 248(1), 249(3) and 250(2)

## FORM FOR NUTRITION INFORMATION PANEL

## NUTRITION INFORMATION

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Servings per package (here insert number of servings)\*

---

Serving size: (here insert the serving size)\*

---

Per Serving\* or

Per 100 g  
(or 100 ml)

---

TWELFTH SCHEDULE — *continued*

|  |   |   |
|--|---|---|
| Energy   | kcal, kJ or both  | kcal, kJ or both  |
| Protein  | g   | g   |
| Fat  | g   | g   |
| Carbohydrate   | g   | g   |
| (here insert the nutrients for which nutrition claims are made, or any other nutrients to be declared) | mcg, mg, g or other units of measurement as appropriate | mcg, mg, g or other units of measurement as appropriate |

\* Applicable only if the nutrients are declared on a per serving basis.

*[S 493/2013 wef 01/08/2013]*

*[S 175/2012 wef 02/05/2012]*

*[S 49/2016 wef 02/02/2016]*

## THIRTEENTH SCHEDULE

Regulation 18(3) and (4)

## PERMITTED SWEETENING AGENTS IN SELECTED FOODS AND THEIR MAXIMUM PERMITTED LEVELS

| Selected Foods  | Maximum amount of Sweetening Agent in parts per million |           |                               |         |                                 |           |
|---|---|-----------|-------------------------------|---------|---------------------------------|-----------|
|   | Sweetening Agent No. 1                                  | 2         | 3                             | 4       | 5                               | 6         |
|   | Acesulfame-K  | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |
| <u>Non-alcoholic drinks</u>   |   |           |                               |         |                                 |           |
| Dairy-based drinks (flavoured and/or fermented)                             | 350 <sup>(a)</sup>                                      | 80        | 250 <sup>(a)</sup>            | 20      | 200                             | 300       |
| Fruit drinks  | 350 <sup>(a)</sup>                                      | 80        | 250 <sup>(a)</sup>            | 20      | 125 <sup>(a)</sup>              | 300       |
| Vegetable juice drinks  | 350 <sup>(a)</sup>                                      | 80        | 400 <sup>(a)</sup>            | 20      | 125 <sup>(a)</sup>              | 300       |
| Water-based flavoured drinks, including "sport", "energy", or "electrolyte" | 350   | 80        | 250                           | 20      | 160                             | 300       |

## THIRTEENTH SCHEDULE — continued

| Maximum amount of Sweetening Agent in parts per million  |                        |           |                               |         |                                 |           |
|--|------------------------|-----------|-------------------------------|---------|---------------------------------|-----------|
|  | Sweetening Agent No. 1 | 2         | 3                             | 4       | 5                               | 6         |
|  | Acesulfame-K           | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |
| <b>Selected Foods</b>  |                        |           |                               |         |                                 |           |
| drinks and particulated drinks   |                        |           |                               |         |                                 |           |
| Ready-to-drink coffee, coffee substitutes, tea, herbal infusions and other hot cereal and grain beverages (excluding cocoa), and pre-mixes for such products | 500                    | 200       |                               | 50      | 100                             | 300       |
| Soybean-based beverages  |                        |           |                               |         | 200                             |           |

## THIRTEENTH SCHEDULE — continued

|  | Maximum amount of Sweetening Agent in parts per million |                  |  |                |  |                  |
|--|---|------------------|--|----------------|--|------------------|
|  | Sweetening Agent No. 1                                  | 2                | 3  | 4              | 5  | 6                |
| <b>Selected Foods</b>  | <b>Acesulfame-K</b>                                     | <b>Saccharin</b> | <b>Cyclamates<br/>(as cyclamic acid)</b> | <b>Neotame</b> | <b>Steviol Glycosides<br/>(as steviol)</b> | <b>Sucralose</b> |
| <u>Cheese and cheese products</u>  |   |                  |  |                |  | 500              |
| Cheese-based preparations  |   |                  |  |                |  |                  |
| <u>Desserts</u>  |   |                  |  |                |  |                  |
| Dairy-based desserts and dessert mixes                                       | 350   | 100              | 250                                      | 32             | 330  | 400              |
| Fat-based desserts and dessert mixes, excluding dairy-based dessert products | 350   | 100              | 250                                      | 32             | 330  | 400              |

## THIRTEENTH SCHEDULE — continued

| Maximum amount of Sweetening Agent in parts per million                                |                        |           |                               |         |                                 |           |
|--|------------------------|-----------|-------------------------------|---------|---------------------------------|-----------|
|  | Sweetening Agent No. 1 | 2         | 3                             | 4       | 5                               | 6         |
| Selected Foods   | Acesulfame-K           | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |
| Fruit-based desserts and dessert mixes, including fruit-flavoured water-based desserts | 350                    | 100       | 250                           | 32      | 350                             | 400       |
| Cereal-based and starch-based desserts and dessert mixes                               | 350                    | 100       | 250                           | 32      | 165                             | 400       |
| Egg-based desserts and dessert mixes   | 350                    | 100       | 250                           | 32      | 330                             | 400       |
| <u>Edible ices</u>   |                        |           |                               |         |                                 |           |

## THIRTEENTH SCHEDULE — continued

|  | Maximum amount of Sweetening Agent in parts per million |           |                               |         |                                 |           |
|--|---|-----------|-------------------------------|---------|---------------------------------|-----------|
|  | Sweetening Agent No. 1                                  | 2         | 3                             | 4       | 5                               | 6         |
| Selected Foods   | Acesulfame-K  | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |
| Edible ices (including sherbet and sorbet)                       | 800   | 100       | 250                           | 26      | 270                             | 320       |
| <u>Fruit and vegetable products</u>                              |   |           |                               |         |                                 |           |
| Dried fruit  | 500   | 160       |                               | 100     |                                 | 1500      |
| Candied fruit  | 500   |           |                               | 65      | 40                              | 800       |
| Fruit in vinegar, oil or brine                                   | 200   | 160       |                               | 10      | 160                             | 180       |
| Vegetables and seaweeds in vinegar, oil, brine, or soybean sauce | 200   | 160       |                               | 10      | 330                             | 180       |

THIRTEENTH SCHEDULE — *continued*

| Maximum amount of Sweetening Agent in parts per million                 |                        |           |                               |         |                                 |           |
|---|------------------------|-----------|-------------------------------|---------|---------------------------------|-----------|
|   | Sweetening Agent No. 1 | 2         | 3                             | 4       | 5                               | 6         |
| Selected Foods  | Acesulfame-K           | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |
| Canned or bottled (pasteurised) fruit                                   | 350                    | 200       | 1000 <sup>(b)</sup>           | 32      | 330                             | 400       |
| Fruit preparations (including pulp, purees and fruit toppings)          | 350                    | 200       | 250                           | 32      | 330                             | 400       |
| Fermented fruit products  | 350                    | 160       |                               | 65      | 115                             | 150       |
| Fruit fillings for pastries   | 350                    |           |                               | 100     | 330                             | 400       |
| Canned or bottled (pasteurised) or retort pouch vegetables and seaweeds | 350                    | 160       |                               | 33      | 70                              | 580       |



## THIRTEENTH SCHEDULE — continued

|  | Maximum amount of Sweetening Agent in parts per million |                  |  |                |  |                  |
|--|---|------------------|--|----------------|--|------------------|
|  | Sweetening Agent No. 1                                  | 2                | 3  | 4              | 5  | 6                |
| <b>Selected Foods</b>  | <b>Acesulfame-K</b>                                     | <b>Saccharin</b> | <b>Cyclamates<br/>(as cyclamic acid)</b> | <b>Neotame</b> | <b>Steviol Glycosides<br/>(as steviol)</b> | <b>Sucralose</b> |
| Fermented vegetable and seaweed products, excluding fermented soybean products | 1000  | 200              |  | 33             | 200  | 580              |
| Vegetable, nut and seed spreads  |   |                  |  |                | 330  |                  |
| Jams, jellies and marmalades   | 1000  | 200              | 1000                                     | 32             | 360  | 400              |
| Fruit-based spreads, excluding jams, jellies and marmalades                    | 1000  | 200              | 500                                      | 32             | 330  | 400              |

## THIRTEENTH SCHEDULE — continued

| Maximum amount of Sweetening Agent in parts per million |   |           |                               |         |                                 |   |
|---|---|-----------|-------------------------------|---------|---------------------------------|---|
|   | Sweetening Agent No. 1  | 2         | 3                             | 4       | 5                               | 6   |
| Selected Foods  | Acesulfame-K  | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose   |
| <u>Confectionery</u>                                    |   |           |                               |         |                                 |   |
| Cocoa-based spreads, including fillings                 | 1000  | 200       | 500                           | 32      |                                 | 400   |
| Cocoa and chocolate products                            | 500   | 500       | 500                           | 80      | 550                             | 800   |
| Decorations, toppings (non-fruit) and sweet sauces      | 500   | 500       | 500                           | 100     | 330                             | 1000  |
| Hard candy  | 500 (except for microsweets and breath-freshening mints, where up to 2500 ppm is permitted) | 500       | 500                           | 32      | 700                             | 1800 (except for microsweets and breath-freshening mints, where up to 30000 ppm is permitted) |

## THIRTEENTH SCHEDULE — continued

|  |  | Maximum amount of Sweetening Agent in parts per million |                                  |         |                                    |   |  |
|--|--|---|----------------------------------|---------|------------------------------------|---|--|
|  |  | 2   | 3                                | 4       | 5                                  | 6   |  |
| Sweetening Agent No. 1                   |  | Saccharin   | Cyclamates<br>(as cyclamic acid) | Neotame | Steviol Glycosides<br>(as steviol) | Sucralose   |  |
| <b>Selected Foods</b>                    | <b>Acesulfame-K</b>  |   |                                  |         |                                    |   |  |
| Nougats and marzipans                    | 1000   | 500   | 500                              | 32      | 700                                | 1800  |  |
| Soft candy                               | 1000 (except for microsweets and breath-freshening mints, where up to 2000 ppm is permitted) | 500   | 500                              | 32      | 700                                | 1800 (except for microsweets and breath-freshening mints, where up to 30000 ppm is permitted) |  |
| <u>Cereal and cereal products</u>        |  |   |                                  |         |                                    |   |  |
| Breakfast cereals, including rolled oats | 1200   | 100   |                                  | 32      | 150                                | 400   |  |

## THIRTEENTH SCHEDULE — continued

| Maximum amount of Sweetening Agent in parts per million   |                        |           |                               |         |                                 |           |
|---|------------------------|-----------|-------------------------------|---------|---------------------------------|-----------|
|   | Sweetening Agent No. 1 | 2         | 3                             | 4       | 5                               | 6         |
| Selected Foods  | Acesulfame-K           | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |
| Bread and bakery products, and mixes for these products   | 1000                   |           |                               | 70      |                                 | 650       |
| Flour confectionery products and mixes for these products (applicable to products for special nutritional use only) | 1000                   | 170       | 1600                          | 55      |                                 | 700       |
| <u>Fish and fish products</u>   |                        |           |                               |         |                                 |           |

THIRTEENTH SCHEDULE — *continued*

|   | Maximum amount of Sweetening Agent in parts per million |                  |                                      |                |  |                  |
|---|---|------------------|--------------------------------------|----------------|--|------------------|
|   | Sweetening Agent No. 1                                  | 2                | 3                                    | 4              | 5                                      | 6                |
| <b>Selected Foods</b>   | <b>Acesulfame-K</b>                                     | <b>Saccharin</b> | <b>Cyclamates (as cyclamic acid)</b> | <b>Neotame</b> | <b>Steviol Glycosides (as steviol)</b> | <b>Sucralose</b> |
| Semi-preserved fish and fish products, including molluscs, crustaceans and echinoderms (applicable to sweet and sour products only) | 200   | 160              |                                      | 10             |  | 120              |
| Fully preserved, including canned or fermented fish and fish products, including molluscs, crustaceans and                          | 200   | 160              |                                      | 10             |  | 120              |

## THIRTEENTH SCHEDULE — continued

|   |                                   | Maximum amount of Sweetening Agent in parts per million |                                   |  |                                   |  |                                   |
|---|-----------------------------------|---|-----------------------------------|--|-----------------------------------|--|-----------------------------------|
|   |                                   | 1   | 2                                 | 3  | 4                                 | 5  | 6                                 |
| Sweetening Agent No. 1  |                                   |   |                                   |  |                                   |  |                                   |
| <b>Selected Foods</b>   | <b>Acesulfame-K</b>               |   | <b>Saccharin</b>                  | <b>Cyclamates<br/>(as cyclamic acid)</b> | <b>Neotame</b>                    | <b>Steviol Glycosides<br/>(as steviol)</b> | <b>Sucralose</b>                  |
| echinoderms<br>(applicable to<br>sweet and sour<br>products only)             |                                   |   |                                   |  |                                   |  |                                   |
| <u>Sweeteners</u>   |                                   |   |                                   |  |                                   |  |                                   |
| Tabletop<br>sweetening agents<br>including<br>sweetening agents<br>in sachets | Good<br>manufacturing<br>practice | Good<br>manufacturing<br>practice                       | Good<br>manufacturing<br>practice | Good<br>manufacturing<br>practice        | Good<br>manufacturing<br>practice | Good<br>manufacturing<br>practice          | Good<br>manufacturing<br>practice |
| Pancake syrup and<br>maple syrup  | 1000                              | 300   | 500                               | 70                                       |                                   |  | 1500                              |

## THIRTEENTH SCHEDULE — continued

|  |              | Maximum amount of Sweetening Agent in parts per million |                               |         |   |           |   |
|--|--------------|---|-------------------------------|---------|---|-----------|---|
|  |              | Sweetening Agent No. 1                                  | 2                             | 3       | 4   | 5         | 6 |
| Selected Foods                                 | Acesulfame-K | Saccharin   | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol)                                   | Sucralose |   |
| <u>Seasonings, sauces, soups</u>               |              |   |                               |         |   |           |   |
| Seasonings and condiments (excluding sauces)   | 2000         | 1500  |                               | 32      | 30  | 700       |   |
| Mustards                                       | 350          | 320   |                               | 12      |   | 140       |   |
| Sauces, gravies and dressings, and their mixes | 350          | 160   | 500 (emulsified sauces only)  | 12      | 350 (except for soybean sauces, where up to 165 ppm is permitted) | 450       |   |
| Soups and broths, including mixes              | 110          | 110   |                               | 5       |   | 45        |   |

## THIRTEENTH SCHEDULE — continued

| Maximum amount of Sweetening Agent in parts per million   |                        |           |                               |         |                                 |           |
|---|------------------------|-----------|-------------------------------|---------|---------------------------------|-----------|
|   | Sweetening Agent No. 1 | 2         | 3                             | 4       | 5                               | 6         |
| Selected Foods  | Acesulfame-K           | Saccharin | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |
| <u>Special purpose foods</u>  |                        |           |                               |         |                                 |           |
| Special purpose medical foods (excluding products for infants)                                      | 450                    | 200       | 400                           | 32      | 175                             | 400       |
| Dietetic formulae for weight management   | 450                    | 240       | 400                           | 26      | 175                             | 320       |
| Dietetic foods (excluding dietetic products stated elsewhere in the Table and products for infants) | 450                    | 200       | 400                           |         | 175                             | 400       |



## THIRTEENTH SCHEDULE — continued

|  |              | Maximum amount of Sweetening Agent in parts per million |                               |         |                                 |           |   |
|--|--------------|---|-------------------------------|---------|---------------------------------|-----------|---|
|  |              | Sweetening Agent No. 1                                  | 2                             | 3       | 4                               | 5         | 6 |
| Selected Foods   | Acesulfame-K | Saccharin   | Cyclamates (as cyclamic acid) | Neotame | Steviol Glycosides (as steviol) | Sucralose |   |
| <i>Alcoholic drinks</i><br>Drinks consisting of a mixture of a non-alcoholic drink and beer, cider, perry, spirits or wine | 350          | 80  | 250                           | 20      | 200                             | 250       |   |
| <i>Snacks</i><br>Snacks: ready-to-eat, prepacked, dry, savoury starch products and coated nuts                             | 350          | 100   |                               | 18      | 170                             | 200       |   |

THIRTEENTH SCHEDULE — *continued*

*[S 59/2019 wef 01/02/2019]*

*[S 146/2018 wef 28/03/2018]*

*[S 152/2017 wef 01/04/2017]*

- (<sup>a</sup>) Product label to carry an advisory statement that children 9 years old and below should not consume more than 2 servings a day, based on serving size of 250 ml.
- (<sup>b</sup>) Product label to carry an advisory statement that children 9 years old and below should not consume more than 1 serving a day, based on serving size of 140g.

*[S 195/2011 wef 15/04/2011]*

*[S 704/2020 wef 31/08/2020]*

*[S 813/2020 wef 23/09/2020]*

## FOURTEENTH SCHEDULE

Regulation 9A(1)

## CRITERIA FOR PERMITTED CLAIMS

|    | Claims   | Criteria for food on which claim is made   |
|----|--|--|
| 1. | A healthy diet with adequate calcium and vitamin D, with regular exercise, helps to achieve strong bones and may reduce the risk of osteoporosis. ( <i>here state the name of the food</i> ) is a good source of/high in/enriched in/fortified with calcium. | 1. At least 50% of calcium recommended daily allowance (RDA), which is taken as 800mg; and<br>2. Low in fat (not more than 3g fat per 100g or not more than 1.5g fat per 100ml), or<br>Fat free (not more than 0.15g fat per 100g or 100ml).   |
| 2. | A healthy diet low in sodium may reduce the risk of high blood pressure, a risk factor for stroke and heart disease. ( <i>here state the name of the food</i> ) is sodium free/very low in/low in/reduced in sodium.   | 1. No added salt; or<br>2. Salt/sodium free (not more than 5mg sodium per 100g); or<br>3. Very low in salt/sodium (not more than 40mg per 100g); or<br>4. Low in sodium (not more than 120mg per 100g); or<br>5. Reduced sodium (if sodium content per reference quantity is not more than 15% of sodium RDA, which is taken as 2000mg). |
| 3. | A healthy diet low in saturated fat and trans fat, may reduce the risk of heart disease. ( <i>here state the name of the food</i> ) is free of/low in saturated fats, trans fats.  | 1. Low in saturated fatty acids (not more than 1.5g saturated fatty acids per 100g, and not more than 10% of kilocalories from saturated fatty acids), or<br>Free of saturated fatty acids (not more than 0.5g saturated fatty acids per   |

FOURTEENTH SCHEDULE — *continued*

|    | Claims   | Criteria for food on which claim is made  |
|----|--|---|
|    |  | <p>100g, and not more than 1% of the total fat is trans fatty acids); and</p> <p>2. Free of trans fatty acids (less than 0.5g trans fatty acids per 100g); and</p> <p>3. Low in sugar (not more than 5g per 100g or not more than 2.5g per 100ml), or<br/>Sugar free (not more than 0.5g per 100g), or<br/>Unsweetened or no added sugar; and</p> <p>4. Cholesterol at not more than 100mg per 100g; and</p> <p>5. Reference quantity of the food product should not contain sodium in an amount exceeding 25% of sodium RDA, which is taken as 2000mg.</p> |
| 4. | A healthy diet rich in whole grains, fruits and vegetables that contain dietary fibre, may reduce the risk of heart disease. ( <i>here state the name of the food</i> ) is low in/free of fat and high in dietary fibre. | <p>1. A product from these food groups — whole grains, fruit, vegetables or fibre fortified foods; and</p> <p>2. Low in fat (not more than 3g fat per 100g or not more than 1.5g fat per 100ml), or<br/>Fat free (not more than 0.15g fat per 100g or 100ml); and</p> <p>3. High in dietary fibre (not less than 3g per 100 kcal or not less than 6g per 100g or 100ml); and</p>  |

FOURTEENTH SCHEDULE — *continued*

|    | <b>Claims</b>   | <b>Criteria for food on which claim is made</b>   |
|----|---|---|
|    |   | 4. With at least 25% of the dietary fibre comprising soluble fibre.   |
| 5. | A healthy diet rich in fibre containing foods such as whole grains, fruits and vegetables may reduce the risk of some types of cancers. ( <i>here state the name of the food</i> ) is free of/low in fat and high in dietary fibre. | 1. A product from these food groups — whole grains, fruit, vegetables or fibre fortified foods; and<br>2. Low in fat (not more than 3g fat per 100g or not more than 1.5g fat per 100ml), or Fat free (not more than 0.15g fat per 100g or 100ml); and<br>3. High in dietary fibre (not less than 3g per 100 kcal or not less than 6g per 100g); and<br>4. Reference quantity of the food product should not contain sodium in an amount exceeding 25% of sodium RDA, which is taken as 2000mg. |

[S 152/2017 wef 01/04/2017]

[S 195/2011 wef 15/04/2011]

[S 49/2016 wef 02/02/2016]

## FIFTEENTH SCHEDULE

Regulation 31(7)

## SPECIES OF PREDATORY FISH

1. Anglerfish (*Lophius species*)
2. Atlantic catfish (*Anarhichas lupus*)
3. Bonito (*Sarda sarda*)

FIFTEENTH SCHEDULE — *continued*

4. Eel (*Anguilla* species)
5. Emperor, orange roughy or rosy soldierfish (*Hoplostethus* species)
6. Grenadier (*Coryphaenoides rupestris*)
7. Halibut (*Hippoglossus hippoglossus*)
8. Kingklip (*Genypterus capensis*)
9. Marlin (*Makaira* species)
10. Megrim (*Lepidorhombus* species)
11. Mullet (*Mullus* species)
12. Pike (*Esox lucius*)
13. Pink cusk eel (*Genypterus blacodes*)
14. Plain bonito (*Orcynopsis unicolor*)
15. Poor cod (*Tricopterus minutes*)
16. Portuguese dogfish (*Centroscymnus coelolepis*)
17. Ray (*Raja* species)
18. Redfish (*Sebastes marinus*, *S. mentella*, *S. viviparus*)
19. Sail fish (*Istiophorus platypterus*)
20. Scabbard fish (*Lepidopus caudatus*, *Aphanopus carbo*)
21. Seabream or pandora (*Pagellus* species)
22. Shark (all species)
23. Snake mackerel (*Lepidocybium flavobrunneum*, *Ruvettus pretiosus*, *Gempylus serpens*)
24. Sturgeon (*Acipenser* species)
25. Swordfish (*Xiphias gladius*)
26. Tuna (*Thunnus* species, *Euthynnus* species, *Katsuwonus pelamis*).

[S 816/2014 wef 15/12/2014]

[G.N. Nos. S 264/88; S 372/88; S 103/89; S 292/90;  
S 301/90; S 491/91; S 179/92; S 238/92; S 398/93;  
S 340/98; S 479/98; S 257/99; S 505/99; S 131/2000;  
S 238/2000; S 155/2001; S 121/2002; S 311/2002]

LEGISLATIVE HISTORY  
FOOD REGULATIONS  
(CHAPTER 283, RG 1)

This Legislative History is provided for the convenience of users of the Food Regulations. It is not part of these Regulations.

- 1. G. N. No. S 264/1988 — Food Regulations 1988**  
(G.N. No. S 372/1988; S 103/1989 — Corrigendum)

Date of commencement : 1 October 1988
- 2. G. N. No. S 301/1990 — Food (Amendment No. 2) Regulations 1990**

Date of commencement : 1 September 1990
- 3. G. N. No. S 292/1990 — Food (Amendment) Regulations 1990**

Date of commencement : 1 October 1990
- 4. G. N. No. S 491/1991 — Food (Amendment) Regulations 1991**

Date of commencement : 1 December 1991
- 5. 1990 Revised Edition — Food Regulations**

Date of operation : 25 March 1992
- 6. G. N. No. S 179/1992 — Food (Amendment) Regulations 1992**

Date of commencement : 1 May 1992
- 7. G. N. No. S 238/1992 — Food (Amendment No. 2) Regulations 1992**

Date of commencement : 15 July 1992
- 8. G. N. No. S 398/1993 — Food (Amendment) Regulations 1993**

Date of commencement : 1 October 1993
- 9. G. N. No. S 340/1998 — Food (Amendment) Regulations 1998**

Date of commencement : 19 June 1998
- 10. G. N. No. S 479/1998 — Food (Amendment No. 2) Regulations 1998**

Date of commencement : 15 September 1998
- 11. G. N. No. S 257/1999 — Food (Amendment) Regulations 1999**

Date of commencement : 13 June 1999
- 12. G. N. No. S 505/1999 — Food (Amendment No. 2) Regulations 1999**

Date of commencement : 1 December 1999

- 13. G. N. No. S 131/2000 — Food (Amendment) Regulations 2000**  
Date of commencement : 1 April 2000
- 14. G. N. No. S 238/2000 — Food (Amendment No. 2) Regulations 2000**  
Date of commencement : 1 June 2000
- 15. G. N. No. S 155/2001 — Food (Amendment) Regulations 2001**  
Date of commencement : 1 April 2001
- 16. G. N. No. S 121/2002 — Food (Amendment) Regulations 2002**  
Date of commencement : 1 April 2002
- 17. G. N. No. S 311/2002 — Food (Amendment No. 2) Regulations 2002**  
Date of commencement : 1 July 2002
- 18. 2005 Revised Edition — Food Regulations**  
Date of operation : 30 November 2005
- 19. G. N. No. S 515/2006 — Food (Amendment) Regulations 2006**  
Date of commencement : 1 September 2006
- 20. G.N. No. S 195/2011 — Food (Amendment) Regulations 2011**  
Date of commencement : 15 April 2011
- 21. G.N. No. S 175/2012 — Food (Amendment) Regulations 2012**  
Date of commencement : 2 May 2012
- 22. G.N. No. S 444/2012 — Food (Amendment No. 2) Regulations 2012**  
Date of commencement : 3 September 2012
- 23. G.N. No. S 493/2013 — Food (Amendment) Regulations 2013**  
Date of commencement : 1 August 2013
- 24. G.N. No. S 816/2014 — Food (Amendment) Regulations 2014**  
Date of commencement : 15 December 2014
- 25. G.N. No. S 49/2016 — Food (Amendment) Regulations 2016**  
Date of commencement : 2 February 2016
- 26. G.N. No. S 152/2017 — Food (Amendment) Regulations 2017**  
Date of commencement : 1 April 2017
- 27. G.N. No. S 302/2017 — Food (Amendment No. 2) Regulations 2017**  
Date of commencement : 15 June 2017



- 28. G.N. No. S 146/2018 — Food (Amendment) Regulations 2018**  
Date of commencement : 28 March 2018
- 29. G.N. No. S 59/2019 — Food (Amendment) Regulations 2019**  
Date of commencement : 1 February 2019
- 30. G.N. No. S 580/2019 — Food (Amendment No. 2) Regulations 2019**  
Date of commencement : 1 September 2019
- 31. G.N. No. S 237/2020 — Food (Amendment) Regulations 2020**  
Date of commencement : 3 April 2020
- 32. G.N. No. S 704/2020 — Food (Amendment No. 3) Regulations 2020**  
Date of commencement : 31 August 2020
- 33. G.N. No. S 813/2020 — Food (Amendment No. 4) Regulations 2020**  
Date of commencement : 23 September 2020
- 34. G.N. No. S 424/2020 — Food (Amendment No. 2) Regulations 2020**  
Date of commencement : 1 June 2021