

**Preservatives in Food (Amendment) Regulation 2008**

**Preservatives and Antioxidants**

**User Guidelines**

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Food and Environmental Hygiene Department  
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## **1 Introduction**

### **1.1 Purpose**

The Preservatives in Food (Amendment) Regulation 2008 (the Amendment Regulation) was tabled at the Legislative Council in April 2008 and shall come into operation on 1 July 2008. The Amendment Regulation amended the Preservatives in Food Regulation, Cap. 132BD. These User Guidelines (Guidelines) aim to assist the trade in having a better understanding of the Amendment Regulation, especially the new food category system contained in Schedule 1 to the legislation, and to answer some of the frequently asked questions. The Guidelines also provide detailed description of the categories and sub-categories under the food category system for consistent interpretation and application.

The Guidelines are set out, making reference to the Codex General Standard for Food Additives (Codex Stan 192-1995, Revision 2007) (GSFA), with modifications to cater for the local situation. The Guidelines are subject to revision.

### **1.2 Background**

In Hong Kong, most food safety related rules and regulations are contained in Part V of the Public Health and Municipal Services Ordinance, Cap. 132. The Ordinance stipulates that all food on sale must be wholesome, unadulterated and fit for human consumption. There is also a set of subsidiary legislation which spells out the standards for specific food products or substances allowed in food.

The control on the use of preservatives and antioxidants in food is governed by the Preservatives in Food Regulations, Cap. 132BD. As part of the Government's ongoing efforts to enhance food safety, to protect consumer interests and to keep the local food legislation abreast of international development, the Administration amended Cap. 132BD in April 2008, making reference to GSFA. The Amendment Regulation provides more choices on the use of preservatives and antioxidants, which have been evaluated as safe and are permitted for use internationally.

### **1.3 Disclaimer**

The Guidelines, which should be read in conjunction with the Amendment Regulation, are intended for use as a general reference only. Information contained in the Guidelines may not be exhaustive or complete. Specific issues should be considered on a case by case basis. For detailed legal provisions governing preservatives and antioxidants in food, reference should be made to the relevant legislation (including the Amendment Regulation). Independent legal advice should be sought in case of any doubt.

The Guidelines do not form part of the relevant legislation. The ultimate authority for interpretation of the relevant legislation rests with the Courts.

## 1.4 Definitions

1.4.1 According to the Amendment Regulation, “Antioxidant” means any substance that protects food against deterioration caused by oxidation (including fat rancidity and colour changes) but does not include –

- (a) lecithin;
- (b) ascorbic acid or salts or esters of ascorbic acid;
- (c) tocopherols;
- (d) erythorbic acid, citric acid, tartaric acid, phosphoric acid, lactic acid or the calcium, potassium or sodium salts of any such acid;
- (e) calcium, potassium or sodium salts of gluconic acid;
- (f) acetic and fatty acid esters of glycerol, lactic and fatty acid esters of glycerol or citric and fatty acid esters of glycerol; or
- (g) glucose oxidase derived from *Aspergillus niger* var..

1.4.2 According to the Amendment Regulation, “Preservative” means any substance which is capable of inhibiting, retarding or arresting the process of fermentation, acidification or other deterioration of food or of masking any of the evidence of putrefaction but does not include –

- (a) any permitted colouring matter;
- (b) common salt (sodium chloride);
- (c) lecithin, sugars or tocopherols;
- (d) nicotinic acid or its amide;
- (e) vinegar or acetic acid, lactic acid, ascorbic acid, citric acid, malic acid, phosphoric acid, polyphosphoric acid or tartaric acid or the calcium, potassium or sodium salts of any of the acids specified in this paragraph;
- (f) glycerol, alcohol or potable spirits, isopropyl alcohol, propylene glycol, monoacetin, diacetin or triacetin;
- (g) herbs or hop extract;
- (h) spices or essential oils when used for flavouring purposes;
- (i) any substance added to food by the process of curing known as smoking;
- (j) carbon dioxide, nitrogen or hydrogen when used in the packing of food in hermetically sealed containers;
- (k) nitrous oxide when used in the making of whipped cream; or
- (l) glucose oxidase derived from *Aspergillus niger* var..

## 2 Conditions of Use of Preservatives and Antioxidants

There are eleven additional preservatives and antioxidants permitted for food use in the new standards. The only case of discontinuation is with propyl para-hydroxybenzoate. All these eleven food additives have been evaluated by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and found acceptable for use in foods. These preservatives and antioxidants are also permitted for food use in the Codex General Standard for Food Additives (*CODEX STAN 192-1995, Revision 2007*).

### 2.1 Foods Permitted to Contain Preservatives and Antioxidants

The preservatives and antioxidants listed in Schedule 1 to the Amendment Regulation can only be used in the food categories specified and in all cases, their use must observe the maximum permitted levels specified.

### 2.2 Maximum Permitted Levels

The Amendment Regulation restricts the level at which certain preservatives and antioxidants may be present in food. The 'maximum permitted level' is the greatest proportion of a preservative or antioxidant allowed to be present in relevant food. It is generally expressed as mg "additive"/ kg of "food". However, there are some exceptions. For example, pimaricin in cheese is expressed as mg "additive"/ dm<sup>2</sup> (surface area) of food. Unless otherwise specified, all the maximum permitted levels for preservatives and antioxidants indicated in the Amendment Regulation refer to the levels in food as sold.

### 2.3 Good Manufacturing Practice

All preservatives and antioxidants subject to the provisions of the Amendment Regulation should be used under the conditions of **good manufacturing practice**, which include the following :

- (a) the quantity of the food additive added to the food is limited to the lowest possible level necessary to accomplish the desired effect of adding it;
- (b) the quantity of the food additive that becomes a component of the food as a result of its use in the manufacturing, processing or packaging of a food and that is not intended to accomplish any physical or other technical effect in the food itself, is reduced to a reasonably possible extent; and
- (c) the food additive is prepared and handled in the same way as a food ingredient.

The following food additives are not included in the definition of preservative or antioxidant under Section 2 of the Amendment Regulation. They are therefore excluded from the scope of the Amendment Regulation and are allowed for use in foods in general. The use of such substances however must comply with other relevant legislation in Hong Kong, including the Public Health and Municipal Services Ordinance, Cap 132 and the Food and Drugs (Composition and Labelling) Regulations, Cap. 132W. Their uses also need to observe the general provision that all food sold must be fit for human consumption. In addition, traders should use these food additives in accordance with good manufacturing practice.

According to Section 2 of the Amendment Regulation, food additives that are excluded as antioxidants:

- (i) lecithin
- (ii) ascorbic acid or salts or esters of ascorbic acid
- (iii) tocopherols
- (iv) erythorbic acid, citric acid, tartaric acid, phosphoric acid, lactic acid or the calcium, potassium or sodium salts of any such acid
- (v) calcium, potassium or sodium salts of gluconic acid
- (vi) acetic and fatty acid esters of glycerol, lactic and fatty acid esters of glycerol or citric and fatty acid esters of glycerol
- (vii) glucose oxidase derived from *Aspergillus niger* var.

According to Section 2 of the Amendment Regulation, food additives that are excluded as preservatives:

- (i) any permitted colouring matter
- (ii) common salt (sodium chloride)
- (iii) lecithin, sugars or tocopherols
- (iv) nicotinic acid or its amide
- (v) vinegar or acetic acid, lactic acid, ascorbic acid, citric acid, malic acid, phosphoric acid, polyphosphoric acid or tartaric acid or the calcium, potassium or sodium salts of any of the acids specified in this paragraph
- (vi) glycerol, alcohol or potable spirits, isopropyl alcohol, propylene glycol, monoacetin, diacetin or triacetin
- (vii) herbs or hop extract
- (viii) spices or essential oils when used for flavouring purposes
- (ix) any substance added to food by the process of curing known as smoking
- (x) carbon dioxide, nitrogen or hydrogen when used in the packing of food in hermetically sealed containers
- (xi) nitrous oxide when used in the making of whipped cream
- (xii) glucose oxidase derived from *Aspergillus niger* var.

## **2.4 Use of Two or More Preservatives and Antioxidants**

Unless specified otherwise, the use of two or more preservatives and/ or antioxidants in a food is generally permitted, provided that all relevant preservatives and/ or antioxidants are permitted for use in the relevant food category in Schedule 1 to the Amendment Regulation and that the maximum permitted levels for each individual preservative and/ or antioxidant are observed. In some cases, specific provisions are made in Column 4 (i.e. Remarks) of Schedule 1 concerning combined use of preservatives and/ or antioxidants and they must be observed. For example, according to Note 2 in Column 4 for category 7.2.3 (Mixes for fine bakery wares) of Schedule 1, propyl gallate, butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT) are permitted for use in combination only if the following condition is satisfied: when the quantity of each such food additive present in that food is expressed as a percentage of the maximum permitted level, the sum of those percentages does not exceed 100.

## **2.5 Carry-over of Preservatives and Antioxidants into Compounded Foods**

A compounded food is one that is prepared using two or more ingredients. Pizza is an example of a compounded food. It is impractical to give specific preservative and antioxidant permissions for all compounded foods. The Amendment Regulation takes this into consideration and permits a compounded food to contain preservatives and/ or antioxidants, if they are permitted to be used in the individual ingredient at levels in proportion with the amount of that individual ingredient present in the final compounded food.

## **2.6 Specifications on the Usage of Permitted Preservatives and Antioxidants**

Additional specifications on the usage of permitted preservatives and antioxidants may be imposed in certain food categories. These specifications are stipulated in Column 4 of Schedule 1 to the Amendment Regulation, and must be observed.

Example:

- Note 6 for food category 1.6 (Dairy-based desserts, excluding plain yoghurt) states that the level of propyl gallate is calculated on the dry ingredient, dry weight, dry mix or concentrate basis.

According to the Amendment Regulation, benzoic acid can be used in food category 8.2.2 (cured (including salted) and dried non-heat treated processed meat, poultry and game products in whole pieces or cuts), and food category 8.3.2 (cured (including salted) and dried non-heat treated processed comminuted meat, poultry and game products). Although not specifically required by the Amendment Regulation, benzoic acid should only be applied on the surface of foods under these two sub-categories.

## **2.7 Transitional Arrangement**

From the perspective of food safety, both the standards in the existing Cap. 132BD and the Amendment Regulation are adequate to safeguard public health. To allow sufficient time for the trade to prepare for the changes brought about by the Amendment Regulation, there will be a transitional period of two years. In order for the trade and the consumers to benefit from the amendments, it will be legally in order during the transitional period for any single food item to comply wholly with either the Cap. 132BD or the Amendment Regulation. After the transitional period comes to an end, the Cap. 132BD will be repealed and all food must comply with the Amendment Regulation. The transitional period begins on 1 July 2008 and ends on 30 June 2010 (both dates inclusive).



### **3 The Food Category System**

#### **3.1 Principles of the Food Category System**

Use of the food category system is based on the following principles :

- (a) The food category system is hierarchical, meaning that when a food additive is recognised for use in a general category, it is recognised for use in all its sub-categories, unless otherwise stated. Similarly, when a food additive is recognised for use in a sub-category, its use is recognised in any further sub-categories or individual foodstuffs mentioned in a sub-category.
- (b) The food category system is based on product descriptors of foodstuffs as marketed, unless otherwise stated.
- (c) The Amendment Regulation adopts the carry-over principle. As such, the food category system does not need to specifically mention all compounded foodstuffs (e.g. pizza) because they may contain, pro rata, all the food additives permitted for use in their components.

## 3.2 The Food Category Descriptors

The following food category descriptors are drawn up with reference to the Codex General Standard for Food Additives<sup>1</sup> and provide detailed information on selected food categories and their sub-categories provided in Schedule 1 to the Amendment Regulation. The descriptors do not cover all the categories provided in the law but only those that merit further elaboration.

### 1 Dairy products and analogues, excluding infant formulae and follow-up formulae, and products of food category 2 and its sub-categories

This category includes all types of dairy products that are derived from the milk of any milking animal (e.g. cow, sheep, goat, buffalo). In this category, a “plain” product is one that is not flavoured, nor contains fruit, vegetables or other non-dairy ingredients, nor is mixed with other non-dairy ingredients. Analogues are products in which milk fat has been partially or wholly replaced by vegetable fats or oils.

#### 1.1 Beverage whiteners

This subcategory refers to milk or cream substitute consisting of a vegetable fat-water emulsion in water with milk protein and lactose or vegetable proteins for use in beverages such as coffee and tea. It also includes the same type of products in powdered form. Includes condensed milk analogues, blends of evaporated skimmed milk and vegetable fat and blends of sweetened condensed skimmed milk and vegetable fat.

#### 1.2 Clotted cream

Cream is a fluid dairy product, relatively high in fat content in comparison to milk. Clotted cream refers to thickened, viscous cream formed from the action of milk coagulating enzymes. It includes sour cream (cream subjected to lactic acid fermentation).

#### 1.3 Milk powder and cream powder (plain), including casein and caseinates

This subcategory refers to milk products obtained by partial removal of water from milk or cream and produced in a powdered form. It includes products based on skim, part-skim, low-fat and whole milk. It includes casein and caseinates.

#### 1.4 Milk powder and cream powder analogues

This subcategory refers to products based on a fat-water emulsion and dried for use other than as a beverage whitener (food category 1.1). Examples include imitation dry cream mix and blends of skimmed milk and vegetable fat in powdered form.

#### 1.5 Cheese and analogues

Cheese and cheese analogues are products that have water and fat included within a coagulated milk-protein structure. Products such as cheese sauce (food category 12.8) and cheese-flavoured snacks (food category 14.1) are categorised elsewhere.

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<sup>1</sup> CODEX STAN 192-1995 Revision 2007

### 1.5.1 Unripened cheese (e.g. cottage cheese, cream cheese and mozzarella cheese)

Unripened cheese, including fresh cheese, is ready for consumption soon after manufacture. Examples include cottage cheese (a soft, unripened, coagulated curd cheese), creamed cottage cheese (cottage cheese covered with a creaming mixture), cream cheese (rahmfrischkase, an uncured, soft spreadable cheese) mozzarella and scamorza cheeses. Includes the whole unripened cheese and unripened cheese rind (for those unripened cheeses with a “skin” such as mozzarella). Most products are plain, however, some, such as cottage cheese and cream cheese, may be flavoured or contain ingredients such as fruit, vegetables or meat.

### 1.5.2 Ripened cheese (e.g. camembert cheese, cheddar cheese, edam cheese and gouda cheese)

Ripened cheese is not ready for consumption soon after manufacture, but is held under such time and temperature conditions so as to allow the necessary biochemical and physical changes that characterise the specific cheese. For mould-ripened cheese, the ripening is accomplished primarily by the development of characteristic mould growth throughout the interior and/or on the surface of the cheese. Ripened cheese may be soft (e.g. camembert), firm (e.g. edam, gouda), hard (e.g. cheddar), or extra-hard. It also includes cheese in brine, which is a ripened semi-hard to soft cheese, white to yellowish in colour with a compact texture, and without actual rind that has been preserved in brine until presented to the consumer. Examples of ripened cheese include: blue cheese, brie, gouda, havarti, hard grating cheese, and Swiss cheese.

#### 1.5.2.1 Cheese powder (for reconstitution (e.g. for cheese sauces))

This subcategory refers to dehydrated product prepared from a variety or processed cheese. It does not include grated or shredded cheese (food category 1.5.2 for variety cheese; food category 1.5.4 for processed cheese). Product is intended either to be reconstituted with milk or water to prepare a sauce, or used as-is as an ingredient (e.g. with cooked macaroni, milk and butter to prepare a macaroni and cheese casserole). It includes spray-dried cheese.

### 1.5.3 Whey cheese

This subcategory refers to a solid or semi-solid product obtained by concentration of whey with or without the addition of milk, cream or other materials of milk origin, and moulding of the concentrated product. It includes the whole cheese and the rind of the cheese. This subcategory is different from whey protein cheese (food category 1.5.6).

### 1.5.4 Processed cheese

This subcategory refers to products with a very long shelf life obtained by melting and emulsifying cheese. It includes products manufactured by heating and emulsifying mixtures of cheese, milkfat, milk protein, milk powder, and water in different amounts. Products may contain other added ingredients, such as aromas, seasonings and fruit, vegetables and/or meat. Product may be spreadable or cut into slices and pieces. The term “processed”

does not mean cutting, grating, shredding, etc. of cheese. Cheeses treated by these mechanical processes are included under food category 1.5.2 (ripened cheese). This sub-category includes:

(a) Plain processed cheese - Processed cheese product that does not contain added flavours, seasonings, fruit, vegetables and/or meat. Examples include: American cheese, requeson; and

(b) Flavoured processed cheese, including containing fruit, vegetables, meat, etc. - Processed cheese product that contains added flavours, seasonings, fruit, vegetables and/or meat. Examples include: neufchatel cheese spread with vegetables, pepper jack cheese, cheddar cheese spread with wine, and cheese balls (formed processed cheese coated in nuts, herbs or spices).

#### 1.5.5 Cheese analogues, including imitation cheese, imitation cheese mixes and imitation cheese powders

This subcategory refers to products that look like cheese, but in which milkfat has been partly or completely replaced by other fats. It includes imitation cheese, imitation cheese mixes, and imitation cheese powders.

#### 1.5.6 Whey protein cheese (e.g. ricotta cheese)

This subcategory refers to products containing the protein extracted from the whey component of milk. These products are principally made by coagulation of whey proteins. Example: ricotta cheese. They are different from whey cheese (food category 1.5.3).

#### 1.6 Dairy-based desserts (e.g. ice cream, pudding and fruit or flavoured yoghurt), excluding plain yoghurt

This subcategory includes ready-to-eat flavoured dairy dessert products and dessert mixes. It includes frozen dairy confections and novelties, and dairy-based fillings. It also includes flavoured yoghurt (a milk product obtained by fermentation of milk and milk products to which flavours and ingredients (e.g. fruit, cocoa, coffee) have been added) that may or may not be heat-treated after fermentation. Other examples include: ice cream (frozen dessert that may contain whole milk, skim milk products, cream or butter, sugar, vegetable oil, egg products, and fruit, cocoa, or coffee), ice milk (product similar to ice cream with reduced whole or skim milk content, or made with nonfat milk), jellied milk, frozen flavoured yoghurt, junket (sweet custard-like dessert made from flavoured milk set with rennet), *dulce de leche* (cooked milk with sugar and added ingredients such as coconut or chocolate), butterscotch pudding and chocolate mousse. It includes traditional milk-based sweets prepared from milk concentrated partially, from *khoa* (cow or buffalo milk concentrated by boiling), or *chhena* (cow or buffalo milk, heat coagulated aided by acids like citric acid, lactic acid, malic acid, etc), sugar or synthetic sweetener, and other ingredients (e.g. *maida* (refined wheat flour), flavours and colours (e.g. *peda*, *burfee*, milk cake, *gulab jamun*, *rasgulla*, *rasmalai*, *basundi*)). These products are different from those in food category 3 (edible ices, including water-based frozen desserts, confections and novelties) in that the foods in food category 1.6 are dairy-based, while those in food category 3 are water-based and contain no dairy ingredients.

## 2 Fats and oils, and fat emulsions

This category refers to all fat-based products that are derived from vegetable, animal or marine sources, or their mixtures.

### 2.1 Fats and oils essentially free from water

Edible fats and oils are foods composed mainly of triglycerides (a triglyceride is formed from a glycerol and three fatty acids) from vegetable, animal or marine sources.

#### 2.1.1 Anhydrous butter oil and ghee

The milkfat products anhydrous milkfat, anhydrous butter oil and butter oil are products derived exclusively from milk and/or products obtained from milk by a process that almost completely removes water and nonfat solids. Ghee is a product obtained exclusively from milk, cream or butter by a process that almost completely removes water and nonfat solids; it has a specially developed flavour and physical structure.

#### 2.1.2 Vegetable oils and fats

This subcategory refers to edible fats and oils obtained from edible plant sources. Products may be from a single plant source or marketed and used as blended oils that are generally designated as edible, cooking, frying, table or salad oils. Virgin oils are obtained by mechanical means (e.g. pressing or expelling), with application of heat only so as not to alter the natural composition of the oil. Virgin oils are suitable for consumption in the natural state. Cold pressed oils are obtained by mechanical means without application of heat. Examples include: virgin olive oil, cottonseed oil, peanut oil, and vanaspati.

#### 2.1.3 Lard, tallow, fish oil, and other animal fats

All animal fats and oils should be derived from animals in good health at the time of slaughter and intended for human consumption. Lard is fat rendered from the fatty tissue of swine. Edible beef fat is obtained from fresh bovine fatty tissue covering the abdominal cavity and surrounding the kidney and heart, and from other compact, undamaged fat tissues. Such fresh fat obtained at the time of slaughter is the "killing fat." Prime beef fat (premiere jus or oleo stock) is obtained by low-heat rendering (50-55°C) of killing fat and selected fat trimmings (cutting fat). Secunda beef fat is a product with typical beef fat odour and taste obtained by rendering (60-65°C) and purifying beef fat. Rendered pork fat is fat obtained from the tissue and bones of swine. Edible tallow (dripping) is produced by the rendering of fatty tissue (excluding trimmings and cutting fat), attached muscles and bones of bovine animals or sheep. Fish oils are derived from suitable sources such as herring, sardines, sprat, and anchovies. Other examples include: tallow and partially defatted beef or pork fatty tissue.

### 2.2 Fat emulsions mainly of type water-in-oil

Include all emulsified products excluding fat-based counterparts of dairy products and dairy desserts.

### 2.2.1 Emulsions containing at least 80% fat

This sub-category includes all full-fat products such as butter and margarine. Their fat-reduced counterparts are found in food category 2.2.2.

#### 2.2.1.1 Margarine and similar products

Margarine is a spreadable or fluid water-in-oil emulsion produced mainly from edible fats and oils.

#### 2.2.1.3 Blends of butter and margarine

Butter-margarine blends are mixtures of butter (milkfat) and margarine (edible fats and oils).

### 2.2.2 Emulsions containing less than 80% fat, including fat-reduced butter, fat-reduced margarine and their mixtures

Includes reduced-fat counterparts of butter, margarine, and their mixtures. Includes products derived from butter (e.g. "butterine," a spreadable butter blend with vegetable oils). Includes minarine, a spreadable water-in-oil emulsion produced principally from water and edible fats and oils that are not solely derived from milk. Also includes dairy spreads (reduced fat-based products derived from dairy fat (e.g. milkfat)), and other reduced-fat spreads derived from animal or vegetable fats (e.g. three-quarter fat butter, three-quarter fat margarine, or three-quarter fat butter-margarine blends).

### 2.3 Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions, excluding products with fat derived from milkfat and dessert products of food category 2.4 and its sub-categories (if applicable)

This sub-category includes fat-based counterparts of dairy-based foods excluding dessert products of food category 2.4. The fat portion of these products is derived from sources other than milkfat (e.g. vegetable fats and oils). Examples include: imitation milk (a fat-substituted milk produced from non-fat milk solids by addition of vegetable fats (coconut, safflower or corn oil)); non-dairy whipped cream; non-dairy toppings; and vegetable cream. Mayonnaise is included in food category 12.7.

### 2.4 Fat-based desserts, excluding dairy-based dessert products of food category 1.6 and its sub-categories (if applicable)

Includes fat-based counterparts of dairy-based desserts. Includes ready-to-eat products and their mixes. Also includes non-dairy fillings for desserts. An example is an ice cream-like product made with vegetable fats.

## 3 Edible ices, including water-based frozen desserts, confections and novelties (e.g. sherbet and sorbet)

This category includes water-based frozen desserts, confections and novelties, such as fruit sorbet, "Italian"-style ice, and flavoured ice. Frozen desserts containing primarily dairy ingredients are included in food category 1.6.

#### 4 Fruits and vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

This category includes fruit, and vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds.

##### 4.1 Surface-treated fresh fruit

The surfaces of certain fresh fruit are coated with glazes or waxes or are treated with other food additives that act as protective coatings and/or help to preserve the freshness and quality of the fruit. Examples include apples, oranges, dates, and longans.

##### 4.3 Dried fruit

This subcategory refers to fruit from which water is removed to prevent microbial growth. It includes dried fruit leathers (fruit rolls) prepared by drying fruit purees. Examples include dried apple slices, dried raisins, dried dates, dried lemon, dried shredded or flaked coconut, and dried prunes.

##### 4.4 Fruit pickled in vinegar, oil or brine

Includes pickled products such as pickled plums, mango pickles, lime pickles, pickled gooseberries, and pickled watermelon rind, excluding candied fruit of food category 4.8.

##### 4.5 Canned or bottled (pasteurized or heat-sterilized) fruit

Fully preserved product in which fresh fruit is cleaned and placed in cans or jars with natural juice or sugar syrup (including artificially sweetened syrup) and heat-sterilized or pasteurized. Includes products processed in retort pouches. Examples include: canned fruit salad, and applesauce in jars.

##### 4.6 Jams, jellies, marmalades

Jams, preserves and conserves are thick, spreadable products prepared by boiling whole fruit or pieces of fruit, fruit pulp or puree, with or without fruit juice or concentrated fruit juice, and sugar to thicken, and to which pectin and fruit pieces may be added. Jelly is a clear spreadable product prepared similarly to jam, except that it is has a smoother consistency and does not contain fruit pieces. Marmalade is a thick spreadable fruit slurry prepared from whole fruit, fruit pulp or puree (usually citrus), and boiled with sugar to thicken, to which pectin and fruit pieces and fruit peel pieces may be added. Includes dietetic counterparts made with non-nutritive high-intensity sweeteners. Examples include: orange marmalade, grape jelly, and strawberry jam.

##### 4.7 Fruit-based spreads (e.g. apple butter, lemon curd and chutney) excluding products of food category 4.6 and its sub-categories (if applicable)

Includes all other fruit-based spreads, such as apple butter and lemon curd. Also includes condiment-type fruit products such as mango chutney and raisin chutney.

##### 4.8 Candied fruit

Includes glazed fruits (fruit treated with a sugar solution and dried), candied fruit (glazed fruit

immersed in a sugar solution and dried so that the fruit is covered by a candy-like sugar shell), and crystallised fruit (glazed fruit rolled in icing or granulated sugar and dried). Examples include: cocktail (maraschino) cherries, candied citrus peel, candied citrons (e.g. used in holiday fruitcakes), mostarda di frutta, and traditional Chinese food items (e.g. candied kumquat).

#### 4.9 Fruit preparations, including pulps, purees, fruit sauces, fruit toppings, coconut milk and coconut cream

Fruit pulp is not usually intended for direct consumption. It is a slurry of lightly steamed and strained fresh fruit, with or without added preservatives. Fruit puree (e.g. mango puree, prune puree) is produced in the same way, but has a smoother, finer texture, and may be used as fillings for pastries, but is not limited to this use. Fruit sauce (e.g. pineapple sauce or strawberry sauce) is made from boiled fruit pulp with or without added sweeteners and may contain fruit pieces. Fruit sauce may be used as toppings for fine bakery wares and ice cream sundaes. Fruit syrup (e.g. blueberry syrup) is a more liquid form of fruit sauce that may be used as a topping e.g. for pancakes. Non-fruit toppings are included in food category 5.4 (sugar- and chocolate- based toppings) and sugar syrups (e.g. maple syrup) are included in food category 11.7. Coconut milk and coconut cream are products prepared using a significant amount of separated, whole, disintegrated, macerated or comminuted fresh endosperm (kernel) of coconut palm and expelled, where most filterable fibers and residues are excluded, with or without coconut water, and/or with additional water. Coconut milk and coconut cream are treated by heat pasteurization, sterilization or ultrahigh temperature (UHT) processes. Coconut milk and coconut cream may also be produced in concentrated or skim (or "light") forms. Examples of traditional foods in this sub-category are: tamarind concentrate (clean extract of tamarind fruit with not less than 65% total soluble solids), tamarind powder (tamarind paste mixed with tapioca starch), tamarind toffee (mixture of tamarind pulp, sugar, milk solids, antioxidants, flavours, stabilisers and preservatives), and fruit bars (a mixture of fruit (mango, pineapple, or guava) pulp mixed with sugar, flavours and preservatives, dried into a sheet).

#### 4.10 Fruit-based desserts, including fruit-flavoured water-based desserts, excluding fine bakery wares containing fruit of food categories 7.2.1 and 7.2.2 and their sub-categories (if applicable), fruit-flavoured edible ices of food category 3 and its sub-categories (if applicable) and fruit-containing frozen dairy desserts of food category 1.6 and its sub-categories (if applicable)

Includes the ready-to-eat products and mixes. Includes fruit-flavoured gelatine, rote gruze, frutgrod, fruit compote, nata de coco, and *mitsumame* (gelatine-like dessert of agar jelly, fruit pieces and syrup). This category does not include fine bakery wares containing fruit (food categories 7.2.1 and 7.2.2), fruit-flavoured edible ices (food category 3), or fruit-containing frozen dairy desserts (food category 1.6).

#### 4.11 Fermented fruit products

Type of pickled product produced by preservation in salt and by lactic acid fermentation. Examples include: fermented plums.



4.12 Fruit fillings for pastries, excluding purees of food category 4.9 and its sub-categories (if applicable)

Includes the ready-to-eat products and mixes. Includes all type of fillings excluding purees (food category 4.9). These fillings usually include whole fruit or fruit pieces. Examples include: cherry pie filling and raisin filling for oatmeal cookies.

4.13 Cooked fruit

Fruit that is steamed, boiled, baked, or fried, with or without a coating, for presentation to the consumer. Examples include: baked apples, fried apple rings, and peach dumplings (baked peaches with a sweet dough covering).

4.14 Peeled, cut or shredded fresh potatoes and white vegetables

Fresh vegetables (e.g. peeled raw potatoes) that are presented to the consumer to be cooked at home (e.g. in the preparation of hash brown potatoes).

4.15 Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

This sub-category refers to fresh vegetables that are usually blanched and frozen. Examples include: quick-frozen corn, quick-frozen French-fried potatoes, quick-frozen peas, and quick-frozen whole processed tomatoes.

4.16 Dried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds

Products in which the natural water content has been reduced below that critical for growth for microorganisms without affecting the important nutrients. The product may or may not be intended for rehydration prior to consumption. Includes vegetable powders that are obtained from drying the juice, such as tomato powder and beet powder. Examples include: dried potato flakes and dried lentil. Examples of Oriental dried products include: dried sea tangle (kelp; *kombu*), dried sea tangle with seasoning (*shiokombu*), dried seaweed (*tororo-kombu*), dried gourd strips (*kampyo*), dried laver (*nori*), dried laminariales (*wakame*), and dried cabbage.

4.17 Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweeds pickled in vinegar, oil, brine, or soy sauce, excluding fermented soybean products of food categories 12.13 and 12.14 and their sub-categories (if applicable) and fermented vegetables of food category 4.21 and its sub-categories (if applicable)

Products prepared by treating raw vegetables with salt solution excluding fermented soybean products. Fermented vegetables, which are a type of pickled product, are classified in food category 4.21. Fermented soybean products are classified in food categories 12.13 and 12.14. Examples include: pickled cabbage, pickled cucumber, olives, pickled onions, mushrooms in oil, marinated artichoke hearts, achar, and picalilli. Examples of Oriental-style pickled vegetables include: *tsukemono* such as rice bran pickled vegetables (*nuka-zuke*), *koji*-pickled vegetables (*koji-zuke*), sake lees-pickled vegetables (*kasu-zuke*),

*miso*-pickled vegetables (*miso-zuke*), soy sauce-pickled vegetables (*shoyu-zuke*), vinegar-pickled vegetables (*su-zuke*) and brine-pickled vegetables (*shio-zuke*). Other examples include: pickled ginger, pickled garlic, and chilli pickles.

4.18 Canned or bottled (pasteurized or heat-sterilized) or retort pouch vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweeds

Fully preserved product in which fresh vegetables are cleaned, blanched, and placed in cans or jars in liquid (e.g. brine, water, oil or sauce), and heat-sterilized or pasteurized. Examples include: canned chestnuts, canned chestnut puree, asparagus packed in glass jars, canned and cooked pink beans, canned tomato paste (low acid), and canned tomatoes (pieces, wedges or whole).

4.19 Vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweed, and nut and seed purees and spreads (e.g. tomato puree, peanut butter and cashew butter)

Vegetable purees are finely dispersed slurries prepared from the concentration of vegetables, which may have been previously heat-treated (e.g. steamed). The slurries may be filtered prior to packaging. Purees contain lower amounts of solids than pastes (found in food category 4.20). Examples include: tomato puree, peanut butter (a spreadable paste made from roasted and ground peanuts by the addition of peanut oil), other nut butters (e.g. cashew butter), and pumpkin butter.

4.20 Vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweed, and nut and seed pulps, pastes and preparations (e.g. vegetable desserts and sauces, and candied vegetables) other than food category 4.19, and its sub-categories (if applicable)

Vegetable pastes and pulps are prepared as described for vegetable purees (food category 4.19). However, pastes and pulps have a higher amount of solids, and are usually used as components of other foods (e.g. sauces). Examples include: potato pulp, horseradish pulp, aloe extract, salsa (e.g. chopped tomato, onion, peppers, spices and herbs), sweet red bean paste (*an*), sweet coffee bean paste (filling), tomato paste, tomato pulp, tomato sauce, crystallised ginger, bean-based vegetable dessert (*namagashi*), and traditional Chinese candied vegetables (e.g. candied chestnut).

4.21 Fermented vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweed products, excluding fermented soybean products of food categories 12.13 and 12.14, and their sub-categories (if applicable)

Fermented vegetables are a type of pickled product, formed by the action of lactic acid bacteria, usually in the presence of salt. Traditional Oriental fermented vegetable products are prepared by air-drying vegetables and exposing them to ambient temperatures so as to allow the microorganisms to flourish; the vegetables are then sealed in an anaerobic environment and salt (to generate lactic acid), spices and seasonings are added. Examples include: red pepper paste, fermented vegetable products (some *tsukemono* other than food

category 4.17), *kimchi* (fermented Chinese cabbage and vegetable preparation), and sauerkraut (fermented cabbage). Excludes fermented soybean products (e.g. fermented soy sauce), which are found in food categories 12.13 and 12.14.

#### 4.22 Cooked or fried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweeds

Vegetables that are steamed, boiled, baked, or fried, with or without a coating, for presentation to the consumer. Examples include: simmered beans, pre-fried potatoes, fried okra, and vegetables boiled down in soy sauce (*tsukudani*).

### 5 Confectionery

Includes all cocoa and chocolate products (food category 5.1), other confectionery products (food category 5.2), chewing gum (food category 5.3) and decorations and icings (food category 5.4).

#### 5.1 Cocoa products and chocolate products including imitations and chocolate substitutes

This category is divided into cocoa- and chocolate- based products.

##### 5.1.1 Cocoa mixes (powders) and cocoa mass/cakes

Includes a variety of products that are used in the manufacture of other chocolate products or in the preparation of cocoa-based beverages. Most cocoa products have their origin in the cocoa nib, which is obtained from cocoa beans that have been cleaned and freed from the shells. Cocoa mass is obtained from the mechanical disintegration of the nib. Depending on the desired finished chocolate product, the cocoa nib or mass may be treated by an alkalisation process that mellows the flavour. Cocoa dust is the fraction of the cocoa bean produced as a product during winnowing and degerming. Cocoa powder is produced by reducing the fat content of cocoa mass or liquor by pressing (including expeller pressing) and molding into a cocoa cake. The cocoa cake is disintegrated and ground to cocoa powder. Cocoa liquor is a homogeneous flowing paste produced from the cocoa nib, which has been roasted, dried, disintegrated and milled. Cocoa-sugar mixtures contain only cocoa powder and sugar. Chocolate powder for beverages is made from cocoa liquor or cocoa powder and sugar to which flavouring (e.g. vanillin) may be added. Examples include: drinking chocolate powder; breakfast cocoa; cocoa dust (fines), nibs, mass, press cake; chocolate liquor; cocoa mixes (powders for preparing the hot beverage); cocoa-sugar mixture; and dry mixes for sugar-cocoa confectionery. Most finished chocolate products are included in food category 5.1.4.

##### 5.1.2 Cocoa mixes (syrups)

Products that may be produced by adding a bacterial amylase to cocoa liquor. The enzyme prevents the syrup from thickening or setting by solubilising and dextrinising cocoa starch. Includes products such as chocolate syrup used to prepare chocolate milk or hot chocolate. Chocolate syrup differs from fudge sauce (e.g. for ice cream sundaes), which is found in food category 5.4.

### 5.1.3 Cocoa-based spreads, including fillings (e.g. cocoa butter)

Products in which cocoa is mixed with other ingredients (usually fat-based) to prepare a spreadable paste that is used as a spread for bread or as a filling for fine bakery wares. Examples include: cocoa butter, fillings for bonbons and chocolates, chocolate pie filling, and nut-chocolate based spreads for bread.

### 5.1.4 Cocoa and chocolate products, including chocolate-covered nuts and fruit

Chocolate is produced from cocoa nibs, mass, press cake, powder, or liquor with or without addition of sugar, cocoa butter, aroma or flavouring substances, and optional ingredients (e.g. nuts). Includes chocolate-covered nuts and fruit (e.g. raisins), but does not include yoghurt-, cereal-, and honey-covered nuts (food category 14.2). Examples include: bonbons, cocoa butter confectionery (composed of cocoa butter, milk solids and sugar), white chocolate, chocolate chips (e.g. for baking), milk chocolate, cream chocolate, sweet chocolate, bitter chocolate, filled chocolate (chocolate with a texturally distinct centre and external coating, excluding flour confectionery and pastry products of food categories 7.2.1 and 7.2.2), and composite chocolate (chocolate with added edible substances excluding flour, starch and fat).

### 5.1.5 Imitation chocolate, chocolate substitute products

Includes chocolate-like products that are not cocoa-based but have somewhat similar organoleptic properties. Examples include: carob chips.

## 5.2 Confectionery, including hard candy, soft candy and nougats, excluding products of food categories 5.1, 5.3 and 5.4 and their sub-categories (if applicable)

Includes all types of products that primarily contain sugar and their dietetic counterparts manufactured with nutritive or non-nutritive high-intensity sweeteners. Includes hard candy, soft candy, nougats and marzipans (food category 5.2.1). Hard candy refers to products made from water and sugar (simple syrup), colour and flavour that may or may not have a filling. Soft candy refers to products include soft, chewy sugar-based products such as caramels (containing sugar syrup, fats, colour and flavour); jelly-based candies (e.g. jelly beans); and licorice. Also included are Oriental specialties, such as *yokan* and agar jelly for *mitsumame*. Nougats consist of roasted ground nuts, sugar, cocoa that may be consumed as is, or may be used as a filling for chocolate products. This category excludes products of food categories 5.1, 5.3 and 5.4 and their sub-categories (if applicable).

### 5.2.1 Marzipans

Marzipan is a confection consisting of almond paste and sugar that may be shaped and coloured for direct consumption, or may be used as a filling for chocolate products.

## 5.3 Chewing gum

Product made from natural or synthetic gum base containing flavours, sweeteners (nutritive or non-nutritive), aroma compounds, and other food additives. Includes bubble gum and breath-freshener gum products.

#### 5.4 Decorations (e.g. for fine bakery wares), toppings (non-fruit) and sweet sauces

Includes ready-to-eat icings and frostings for cakes, cookies, pies and bread and flour confectionery, as well as mixes for these products. Also includes sugar- and chocolate-based coatings for candy, confections and baked goods, such as chocolate coatings for bonbons and nougat candy. Sweet sauces and toppings include butterscotch sauce for use on ice cream sundaes. These sweet sauces are different from the syrups (e.g. maple, caramel, and flavoured syrups for fine bakery wares and ices) included in food category 11.7. Fruit-based toppings are included in food category 4.9. Chocolate sauce is included in food category 5.1.2.

#### 6 Cereals and cereal products derived from cereal grains, roots and tubers, pulses and legumes, excluding bakery wares of food category 7 and its sub-categories

Includes unprocessed (food category 6.1) and various processed forms of cereal and cereal-based products.

##### 6.1 Whole, broken, or flaked grain, including barley, corn, oats, rice, sorghum, soybeans and wheat

Includes whole, husked, unprocessed cereals and grains. Examples include: barley, corn (maize), hops (for beer manufacture), oats, rice (including enriched, instant and parboiled), sorghum, soybeans, and wheat.

##### 6.2 Flours

Flour is produced from the milling of cereal grains, roots, tubers, pulses or legumes and is sold as such or used as ingredients (e.g. in baked goods). Includes flour pastes for bread and flour confectionery, flour for bread, pastries, noodles and pasta, and flour mixes (physical mixtures of flours from different cereal or grain sources) Examples include: durum wheat flour, self-rising flour, enriched flour, instantised flour, corn flour, corn meal, bran, farina, roasted soybean flour (kinako), konjac flour (devil's tongue jelly powder, konnayaku-ko), cassava flour and maida (refined wheat flour). This category does not include mixes for ordinary bakery wares (food category 7.1.6) and mixes for fine bakery wares (food category 7.2.3) because these dry mixes, in addition to flour, also contain other ingredients.

##### 6.3 Starches

Starch is a glucose polymer occurring in granular form in certain plant species, notably seeds (e.g. cereals, pulses, corn, wheat, rice, beans, peas) and tubers (e.g. tapioca, potato). The polymer consists of linked anhydro-alpha-D-glucose units.

##### 6.4 Breakfast cereals, including rolled oats

Includes all ready-to-eat, instant, and regular hot breakfast cereal products. Examples include: granola-type breakfast cereals, instant oatmeal, farina, corn flakes, puffed wheat or rice, multi-grain (e.g. rice, wheat and corn) breakfast cereals, breakfast cereals made from soy or bran, and extruded-type breakfast cereals made from grain flour or powder.

## 6.5 Pre-cooked pastas and noodles and like products

Products that are treated (i.e., heated, boiled, steamed, cooked, pre-gelatinised or frozen). These products may be sold directly to the consumer (e.g. pre-cooked, chilled gnocchi to be heated prior to consumption), or may be the starch component of prepared meals (e.g. heat-and-serve frozen dinner entrees containing spaghetti, macaroni or noodles). Also includes instant noodles (*sokuseki-men*; e.g. pre-cooked ramen, udon, rice noodles), that are pre-gelatinised, heated and dried prior to sale to the consumer.

### 6.5.1 Instant noodles

Products prepared from wheat flour and/or rice flour and/or other flours and/or starches as the main ingredient, with or without the addition of other ingredients. It may be treated by alkaline agents. It is characterised by the use of pregelatinisation process and dehydration either by frying or by other methods. The product should be presented as one of the following styles:

- (a) fried noodles; or
- (b) non-fried noodles.

## 6.6 Cereal and starch based desserts (e.g. rice pudding and tapioca pudding), including cereal or starch based fillings for desserts

Dessert products containing cereal, starch or grain as the main ingredient. Also includes cereal- or starch based fillings for desserts. Examples include: rice pudding, semolina pudding, tapioca pudding, rice flour dumplings (*dango*), a steamed yeast-fermented wheat flour dough dessert (*musipan*), and a starchy pudding based dessert (*namagashi*).

## 7 Bakery wares

Includes categories for bread and ordinary bakery wares (food category 7.1) and for sweet, salty and savoury fine bakery wares (food category 7.2).

### 7.1 Bread and ordinary bakery wares and mixes, including all types of non-sweet bakery products and bread-derived products

Includes all types of non-sweet bakery products and bread-derived products.

#### 7.1.1 Breads and rolls (e.g. white breads, rye breads, raisin breads, whole wheat breads, whole wheat rolls and soda breads)

Includes yeast-leavened non-sweet breads and bread-derived products. Also includes soda bread. Examples include: white bread, rye bread, pumpernickel bread, raisin bread, whole wheat bread, pain courant francais, malt bread, hamburger rolls, whole wheat rolls, and milk rolls.

#### 7.1.2 Crackers (e.g. soda crackers, rye crisps), excluding flavoured crackers of food category 14.1 and its sub-categories (if applicable)

The term "cracker" refers to a thin, crisp wafer, usually of unsweetened dough. Examples include: soda crackers, rye crisps, and matzohs. Flavoured crackers (e.g. cheese flavoured) that are consumed as snacks are in food category 14.1.

### 7.1.3 Other ordinary bakery products (e.g. bagels, pita, English muffins)

Includes all other ordinary bakery wares, such as cornbread and biscuits. The term “biscuit” in this category refers to a small cake of shortened bread, leavened with baking powder or baking soda. It does not refer to the British “biscuit,” which is a “cookie” or “sweet cracker” included in food category 7.2.1.

### 7.1.4 Bread-type products, including bread stuffing and bread crumbs

Includes bread-based products such as croutons, bread stuffing and stuffing mixes, and prepared doughs (e.g. for biscuits). Bread mixes are included in food category 7.1.6.

### 7.1.5 Steamed breads (e.g. mantou and bao)

Oriental-style leavened wheat (or rice) products that are cooked in a steamer. Products may be made with or without filling. In China, products without filling are called steamed bread (*mantou*), and those with filling are called steamed buns (*baozi* or *bao*). Twisted rolls of various shapes (*huajuan*) may also be prepared. Examples include: steamed bun with meat, jam or other filling (*manjyu*).

### 7.1.6 Mixes for bread and ordinary bakery wares

Includes all the mixes containing the dry ingredients to which wet ingredients (e.g. water, milk, oil, butter, eggs) are added to prepare a dough for baked goods from food categories 7.1.1 to 7.1.5. Examples include: French bread mix, tin bread mix, panettone mix, ciabatta mix, among others. Mixes for fine bakery wares (e.g. cakes, cookies, pancakes) are found in food category 7.2.3.

## 7.2 Fine bakery wares and mixes

Includes sub-categories for ready-to-eat products (food categories 7.2.1 and 7.2.2) as well as mixes (food category 7.2.3) for preparing fine baked goods.

### 7.2.1 Cakes, cookies and pies (e.g. cheesecakes, western cakes, moon cakes, oatmeal cookie, fruit-filled pies and custard pies)

The term “sweet cracker” or “sweet biscuit” used in this category refers to a cookie-like product that may be eaten as a dessert. Examples include: butter cake, cheesecake, fruit-filled cereal bars, pound cake (including *kasutera*), moist cake (type of starchy dessert (*namagashi*)), western cakes, moon cakes, sponge cake, fruit-filled pies (e.g. apple pie), oatmeal cookies, sugar cookies and British “biscuits” (cookies or sweet crackers).

### 7.2.2 Other fine bakery products (e.g. pancakes, waffles, Danish pastry, cones for ice cream, flour confectionery, doughnuts, sweet rolls, scones and muffins)

Includes products that may be eaten as a dessert or as breakfast. Examples include: pancakes, waffles, filled sweet buns (*anpan*), Danish pastry, wafers or cones for ice cream, flour confectionery, and trifles.

### 7.2.3 Mixes for fine bakery wares (e.g. cakes mix, flour confectionery mix, pancakes mix, pie mix and waffle mix)

Mixes containing the dry ingredients to which wet ingredients (e.g. water, milk, oil, butter, eggs) are added to prepare a dough for fine baked goods. Examples include: cake mix, flour confectionery mix, pancake mix, pie mix, and waffle mix. Prepared dough is found in food category 7.1.4. Mixes for ordinary bakery wares (e.g. bread) is found in food category 7.1.6.

## 8 Meat and meat products, including poultry and game

This category includes all types of meat, poultry, and game products, in pieces and cuts or comminuted, fresh (food category 8.1) and processed (food categories 8.2 and 8.3).

### 8.1 Fresh meat, poultry and game, comminuted

Untreated raw comminuted meat, poultry and game. Examples include: fresh beef (hamburger) patties; boerewors; fresh breakfast sausages; gehakt (chopped meat); loganiza (fresh, uncured sausage); fresh meatballs; mechanically deboned, ground and formed poultry pieces (with or without breading or coating); and fresh sausages (e.g. beef, Italian, and pork).

### 8.2 Processed meat, poultry and game products in whole pieces or cuts

Includes various treatments for non-heat treated meat cuts (food categories 8.2.1 – 8.2.3) and heat-treated meat cuts (food category 8.2.4).

#### 8.2.1 Cured (including salted) non-heat treated processed meat, poultry and game products in whole pieces or cuts

Salted products are treated with sodium chloride. Curing may also be achieved by addition of food additives. Smoked products are also included here. Examples include: bacon; side bacon; corned beef; marinated beef; and different types of Oriental pickled products: miso-pickled meat (*miso-zuke*), koji-pickled meat (*koji-zuke*), and soy sauce-pickled meat (*shoyu-zuke*).

#### 8.2.2 Cured (including salted) and dried non-heat treated processed meat, poultry and game products in whole pieces or cuts

The meat cuts may be cured or salted as described for food category 8.2.1 and then dried, or they may only be dried. Drying is achieved either in hot air or in vacuum. Examples include: dried salt pork, dehydrated meat, stuffed loin, Iberian ham, and prosciutto-type ham.

#### 8.2.3 Fermented non-heat treated processed meat, poultry and game products in whole pieces or cuts

Fermented products are a type of pickled product produced by the action of lactic acid bacteria in the presence of salt. Examples include: potted beef and pickled (fermented) pig's feet.

#### 8.2.4 Heat-treated processed meat, poultry and game products in whole pieces or cuts, including cooked (including cured and cooked, and dried and cooked), heat-treated (including sterilized) and canned meat cuts



Includes cooked (including cured and cooked, and dried and cooked), heat-treated (including sterilized) and canned meat cuts. Examples include: cured, cooked ham; cured, cooked pork shoulder; canned chicken meat; and meat pieces boiled in soy sauce (*tsukudani*).

#### 8.2.5 Frozen processed meat, poultry and game products in whole pieces or cuts, including raw and cooked meat cuts that have been frozen

Includes raw and cooked meat cuts that have been frozen. Examples include: frozen whole chickens, frozen chicken parts, and frozen beef steaks.

### 8.3 Processed comminuted meat, poultry and game products

Includes various treatments for non-heat treated products (food categories 8.3.1, 8.3.2 and 8.3.3) and heat-treated products (food category 8.3.4).

#### 8.3.1 Cured (including salted) non-heat treated processed comminuted meat, poultry and game products

Salted products are treated with sodium chloride. Curing may also be achieved by addition of food additives. Also includes smoked products. Examples include: chorizos (spicy pork sausages), salami-type products, salchichon, tocino (fresh, cured sausage), pepperoni, and smoked sausage.

#### 8.3.2 Cured (including salted) and dried non-heat treated processed comminuted meat, poultry and game products

The comminuted products may be cured or salted as described for food category 8.3.1, and then dried, or they may only be dried. Drying is achieved either in hot air or in vacuum. Examples include: pasturmas, dried sausages, cured and dried sausages, beef jerky, Chinese sausages (including traditional cured or smoked pork sausage), and sobrasada.

#### 8.3.3 Fermented non-heat treated processed comminuted meat, poultry and game products

Fermented products are a type of pickled product produced by the action of lactic acid bacteria in the presence of salt. Certain types of sausages may be fermented.

#### 8.3.4 Heat-treated processed comminuted meat, poultry and game products, including cooked (including cured and cooked, and dried and cooked), heat-treated (including sterilized) and canned comminuted products (e.g. foie gras and pates, cooked meatballs)

Includes cooked (including cured and cooked, and dried and cooked), heat-treated (including sterilized) and canned comminuted products. Examples include: pre-grilled beef patties; foie gras and pates; brawn and head cheese; cooked, cured chopped meat; chopped meat boiled in soy sauce (*tsukudani*); canned corned beef; luncheon meats; meat pastes; cooked meat patties; cooked salami-type products; cooked meatballs; saucises de strasbourg; breakfast sausages; brown-and-serve sausages; and terrines (a cooked chopped meat mixture).

8.3.5 Frozen processed comminuted meat, poultry and game products, including raw, partially cooked and fully cooked products (e.g. frozen breaded or battered chicken fingers)  
Includes raw, partially cooked and fully cooked comminuted meat products that have been frozen. Examples include: frozen hamburger patties; frozen breaded or battered chicken fingers.

9 Fish and fish products, including aquatic vertebrates (fish and aquatic mammals (e.g. whales)), aquatic invertebrates (e.g. jellyfish), molluscs (e.g. clams and snails), crustaceans (e.g. shrimps, crabs and lobsters) and echinoderms (e.g. sea urchins and sea cucumbers)  
This broad category is divided into categories for fresh molluscs, crustaceans and echinoderms (food category 9.1) and various processed fish products (food categories 9.2 – 9.4). This category includes aquatic vertebrates (fish and aquatic mammals (e.g. whales)), aquatic invertebrates (e.g. jellyfish), as well as molluscs (e.g. clams, snails), crustaceans (e.g. shrimp, crab, lobster), and echinoderms (e.g. sea urchins, sea cucumbers).

9.1 Fresh molluscs, crustaceans and echinoderms

The term “fresh” refers to products that are untreated except for refrigeration, storage on ice, or freezing upon catching at sea or in lakes or other bodies of water in order to prevent decomposition and spoilage. Includes fresh shrimp, clams, crabs, lobster, snails, etc.

9.2 Processed fish and fish products, including molluscs, crustaceans, and echinoderms

This category refers to fish products that are frozen and may require further cooking, as well as ready-to-eat cooked, smoked, dried, fermented, and salted products.

9.2.1 Frozen (including fresh and partially cooked) fish, fish fillets and fish products, including molluscs, crustaceans, and echinoderms (e.g. frozen clams, frozen cod fillets, frozen crabs, frozen finfish, frozen lobsters, frozen prawns, frozen fish roe and frozen surimi)

Fresh, including partially cooked, fish subjected to freezing or quick-freezing at sea and on land for further processing. Examples include: frozen or deep frozen clams, cod fillets, crab, finfish, haddock, hake, lobster, minced fish, prawns and shrimp; frozen fish roe; frozen surimi; and frozen whale meat.

9.2.2 Frozen uncooked battered fish, fish fillets and fish products, including molluscs, crustaceans and echinoderms (e.g. frozen breaded fish fingers and frozen batter-coated fish fillets)

Uncooked product prepared from fish or fish portions, with dressing in eggs and bread crumbs or batter. Examples include: frozen raw breaded or batter-coated shrimp; and frozen or quick-frozen breaded or battercoated fish fillets, fish portions and fish sticks (fish fingers).

9.2.3 Cooked fish and fish products (excluding frying), including cooked surimi, cooked fish paste and cooked fish roe

Cooked products include steamed, boiled or any other cooking method except frying. The fish may be whole, in portions or comminuted. Examples include: fish sausage; cooked fish

products boiled down in soy sauce (*tsukudani*); cooked surimi product (*kamaboko*); crab-flavoured cooked *kamaboko* product (*kanikama*); cooked fish roe; cooked surimi; cooked, tube-shaped surimi product (*chikuwa*); and cooked fish and lobster paste (surimi-like products). Other fish paste (Oriental type) is found in food category 9.3.4.

#### 9.2.4 Cooked molluscs, crustaceans and echinoderms (excluding frying)

Cooked products include steamed, boiled or any other cooking method except frying. Examples include: cooked *crangon crangon* and *crangon vulgaris* (brown shrimp); cooked shrimp, clams and crabs.

#### 9.2.6 Smoked, dried, fermented, and/or salted fish and fish products, including molluscs, crustaceans and echinoderms

Smoked fish are usually prepared from fresh deep frozen or frozen fish that are dried directly or after boiling, with or without salting, by exposing the fish to freshly-generated sawdust smoke. Dried fish are prepared by exposing the fish to sunlight or drying directly or after boiling in a special installation; the fish may be salted prior to drying. Salted fish are either rubbed with salt or placed in a salt solution. This manufacturing process is different from that described in food category 9.3 for marinated and pickled fish. Cured fish is prepared by salting and then smoking fish. Examples include: salted anchovies, shrimp, and shad; smoked chub, cuttlefish and octopus; fish ham; dried and salted species of the *Gadidae* species; smoked or salted fish paste and fish roe; cured and smoked sablefish, shad, and salmon; dried shellfish, dried bonito (*katsuobushi*), and boiled, dried fish (*niboshi*).

#### 9.3 Semi-preserved fish and fish products, including molluscs, crustaceans and echinoderms

Includes products treated by methods such as marinating, pickling and partial cooking that have a limited shelf life.

##### 9.3.1 Fish and fish products, including molluscs, crustaceans and echinoderms, marinated with vinegar or wine and/or in jelly

Marinated products are manufactured by soaking the fish in vinegar or wine with or without added salt and spices. They are packaged in jars or cans and have a limited shelf life. Products in jelly may be manufactured by tenderising fish products by cooking or steaming, adding vinegar or wine, salt and preservatives, and solidifying in a jelly. Examples include: “rollmops” (a type of marinated herring), sea eel (dogfish) in jelly and fish aspic.

##### 9.3.2 Fish and fish products, including molluscs, crustaceans and echinoderms, pickled and/or in brine

Pickling results from the treatment of the fish with a salt and vinegar or alcohol (e.g. wine) solution. Examples include: different types of Oriental pickled products: *koji*-pickled fish (*koji-zuke*), lees-pickled fish (*kasu-zuke*), *miso*-pickled fish (*miso-zuke*), soy sauce-pickled fish (*shoyu-zuke*), and vinegar-pickled fish (*su-zuke*); pickled whale meat; and pickled herring and sprat.

### 9.3.3 Semi-preserved salmon substitutes, caviar, and other fish roe products, salted and/or treated with a preservative

Roe is usually produced by washing, salting and allowing to ripen until transparent. The roe is then packaged in glass or other suitable containers. The term “caviar” refers only to the roe of the sturgeon species (e.g. beluga). Caviar substitutes are made of roe of various sea and freshwater fish (e.g. cod and herring) that are salted, spiced, dyed and may be treated with a preservative. Examples include: salted salmon roe (*sujiko*), processed, salted salmon roe (*ikura*), cod roe, salted cod roe (*tarako*) and lumpfish caviar. Occasionally, roe may be pasteurized. In this case, it is included in food category 9.4, since it is a fully preserved product. Roe products that are frozen, cooked or smoked are included in categories 9.2.1, 9.2.3 and 9.2.6 respectively.

### 9.3.4 Semi-preserved fish and fish products, including molluscs, crustaceans and echinoderms (e.g. traditional Oriental fish paste), excluding products of food categories 9.3.1 – 9.3.3 and their sub-categories (if applicable)

Examples include fish or crustacean pates and traditional Oriental fish paste. The latter is produced from fresh fish or the residue from fish sauce production, which is combined with other ingredients such as wheat flour, bran, rice or soybeans. The product may be further fermented. Cooked fish or crustacean pastes (surimi-like products) are found in food categories 9.2.3 and 9.2.4 respectively.

### 9.4 Fully preserved (including canned or fermented) fish and fish products, including molluscs, crustaceans and echinoderms

Products with extended shelf life, manufactured by pasteurizing or steam retorting and packaging in vacuum sealed air-tight containers to ensure sterility. Products may be packed in their own juice or in added oil or sauce. This category excludes fully cooked products (see food categories 9.2.3 and 9.2.4). Examples include: canned tuna, clams, crab, fish roe and sardines; gefilte fish balls; and surimi (heat-pasteurized).

## 10 Eggs products

Includes products that may substitute for fresh eggs (food categories 10.1 and 10.2) and other egg products (food category 10.3).

### 10.1 Pasteurized and chemically preserved (e.g. by addition of salt) liquid egg products, including whole egg, egg yolk and egg white

They are produced from fresh eggs by either (i) mixing and purifying the whole egg; or (ii) separating the egg white and yolk, and then mixing and purifying each separately. The purified whole egg, egg yolk or egg white is pasteurized and chemically preserved (e.g. by addition of salt). This sub-category does not include frozen egg products.

### 10.2 Dried and/or heat coagulated (pasteurized) egg products

They are produced from fresh eggs by either (i) mixing and purifying the whole egg; or (ii) separating the egg white and yolk, and then mixing and purifying each separately. Sugars are removed from the purified whole egg, egg yolk or egg white, which is then pasteurized and

dried. This sub-category does not include frozen egg products.

### 10.3 Egg-based desserts (e.g. egg custard and custard fillings for fine bakery wares)

Includes ready-to-eat products and products to be prepared from a dry mix. Examples include: flan and egg custard. Also includes custard fillings for fine bakery wares (e.g. pies).

## 11 Sugars and table-top sweeteners, excluding lactose and honey

Includes all standardised sugars (food categories 11.1, 11.2, 11.3 and 11.4) and non-standardised products (e.g. food categories 11.5, 11.6, 11.7 and 11.8). This category does not include lactose and honey.

### 11.1 White sugar, dextrose anhydrous, dextrose monohydrate, fructose

White sugar is purified and crystallised sucrose with a polarisation of not less than 99.7°Z. Dextrose anhydrous is purified and crystallised D-glucose without water of crystallisation. Dextrose monohydrate is purified and crystallised D-glucose with one molecule of water of crystallisation. Fructose is purified and crystallised D-fructose.

### 11.2 Powdered sugar, powdered dextrose

Powdered sugar (icing sugar) is finely pulverised white sugar with or without added anticaking agents. Powdered dextrose (icing dextrose) is finely pulverised dextrose anhydrous or dextrose monohydrate, or a mixture of the two, with or without added anticaking agents.

### 11.3 Soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar

Soft white sugar is fine grain purified, moist sugar, that is white in colour. Soft brown sugar is fine grain moist sugar that is light to dark brown in colour. Glucose syrup is a purified concentrated aqueous solution of nutritive saccharides derived from starch and/or inulin. Dried glucose syrup is glucose syrup from which water has been partially removed. Raw cane sugar is partially purified sucrose crystallised from partially purified cane juice without further purification.

#### 11.3.1 Dried glucose syrup used to manufacture candy products

Dried glucose syrup, as described in food category 11.3, used to manufacture candy products that are included in food category 5.2 (e.g. hard or soft candies).

#### 11.3.2 Glucose syrup used to manufacture candy products

Glucose syrup, as described in food category 11.3, used to manufacture candy products that are included in food category 5.2 (e.g. hard or soft candies).

### 11.4 Plantation or mill white sugar

Purified and crystallised sucrose with a polarisation of not less than 99.5°Z.

### 11.5 Brown sugar (e.g. Demerara sugar), excluding products of food category 11.3 and its sub-categories (if applicable)

Includes large-grain, brown or yellow lump sugars, such as Demerara sugar. Examples include: slab sugar, and crystallised sugar.

11.6 Sugar solutions and syrups, also (partially) inverted, including treacle and molasses, excluding products of food category 11.3 and its sub-categories (if applicable)

Includes co-products of the sugar refining process (e.g. treacle and molasses), invert sugar (equimolar mixture of glucose and fructose produced from the hydrolysis of sucrose), and other sweeteners, such as high fructose corn syrup, high fructose inulin syrup and corn sugar.

11.7 Other sugars and syrups (e.g. xylose, maple syrup, decorative sugar toppings)

Includes all types of table syrups (e.g. maple syrup), syrups for fine bakery wares and ices (e.g. caramel syrup, flavoured syrups), and decorative sugar toppings (e.g. coloured sugar crystals for cookies).

11.8 Table-top sweeteners, including those containing high-intensity sweeteners (e.g. acesulfame potassium and sorbitol)

Includes products that are preparations of high-intensity sweeteners (e.g. acesulfame potassium) and/or of polyols (e.g. sorbitol) which may contain other food additives and/or nutritive ingredients, such as carbohydrates. These products, which are sold to the final consumer, may be in powder, solid (e.g. cubes), or liquid form.

12 Spices, condiments, soups, sauces, salads, yeast and like products, soy sauces, fermented soybeans and soy protein powders and mixes

This is a broad category that includes substances added to food to enhance its aroma and taste (food category 12.1 – herbs and spices; food category 12.2 – condiments; food category 12.3 – vinegars; and food category 12.4 – mustards), certain prepared foods (food categories 12.5 and 12.6 – soups; food categories 12.7-12.10 and 12.13 – sauces; and food category 12.11 – salads), yeast and like products (food category 12.12) and fermented soybean products (food category 12.14 – fermented soybeans).

12.1 Herbs and spices (e.g. basil, oregano, chilli paste, curry paste)

Herbs and spices is intended to enhance the aroma and taste of food. They are usually derived from botanical sources, and may be dehydrated, and either ground or whole. Examples of herbs include basil, oregano and thyme. Examples of spices include cumin and caraway seeds. Spices may also be found as blends in powder or paste form. Examples of spice blends include chilli seasoning, chilli paste, curry paste, curry roux, and dry cures or rubs that are applied to external surfaces of meat or fish.

12.2 Condiments (e.g. meat tenderisers, onion salt and garlic salt), excluding condiment sauces (e.g. ketchup, mayonnaise and mustard)

Condiments include seasonings such as meat tenderisers, onion salt, garlic salt, Oriental seasoning mix (*dashi*), topping to sprinkle on rice (*furikake*, containing e.g. dried seaweed flakes, sesame seeds and seasoning), and seasoning for noodles. The term “condiments” as used in the Guidelines does not include salt, salt substitutes and condiment sauces (e.g.

ketchup, mayonnaise, mustard).

### 12.3 Vinegars, including cider vinegar, wine vinegar, malt vinegar, spirit vinegar, grain vinegar, raisin vinegar and fruit (wine) vinegar

Liquid produced from fermentation of ethanol from a suitable source (e.g. wine, cider). Examples include cider vinegar, wine vinegar, malt vinegar, spirit vinegar, grain vinegar, raisin vinegar, and fruit (wine) vinegar.

### 12.4 Mustards

Condiment sauce prepared from ground, often defatted mustard seed that is mixed into a slurry with water, vinegar, salt, oil and other spices and refined. Examples include Dijon mustard, and “hot” mustard (prepared from seeds with hulls).

### 12.5 Ready-to-eat soups and broths, including canned, bottled, and frozen (e.g. bouillon, consommés, water- and cream-based soups, chowders and bisques)

Water- or milk-based products consisting of vegetable, meat or fish broth with or without other ingredients (e.g. vegetables, meat, noodles). Examples include: bouillon, broths, consommés, water- and cream-based soups, chowders, and bisques.

### 12.6 Mixes for soups and broths (e.g. bouillon powders and cubes, powdered and condensed soups and stock cubes and powders)

Concentrated soup to be reconstituted with water and/or milk, with or without addition of other optional ingredients (e.g. vegetables, meat, noodles). Examples include: bouillon powders and cubes; powdered and condensed soups (e.g. *mentsuyu*); and stock cubes and powders.

### 12.7 Emulsified sauces (e.g. mayonnaise and salad dressing)

These are ready-to eat products. Sauces, gravies and dressings based, at least in part, on a fat- or oil-in water emulsion. Examples include: salad dressing (e.g. French, Italian, Greek, ranch style), fat-based sandwich spreads (e.g. mayonnaise with mustard), salad cream, and fatty sauces.

### 12.8 Non-emulsified sauces, including water-, coconut milk- and milk-based sauces (e.g. barbecue sauce, ketchup, cheese sauce, cream sauce, Worcestershire sauce, brown gravy and chilli sauce)

These are ready-to eat products. Include water-, coconut milk-, and milk-based sauces, gravies and dressings. Examples include: barbecue sauce, tomato ketchup, cheese sauce, Worcestershire sauce, Oriental thick Worcestershire sauce (*tonkatsu sauce*), chilli sauce, sweet and sour dipping sauce, and white (cream-based) sauce (sauce consisting primarily of milk or cream, with little added fat (e.g. butter) and flour, with or without seasoning or spices).

### 12.9 Mixes for sauces and gravies (e.g. mixes for cheese sauce, hollandaise sauce and salad dressing)

Concentrated product, usually in powdered form, to be mixed with water, milk, oil or other liquid to prepare a finished sauce or gravy. Examples include mixes for cheese sauce,

hollandaise sauce, and salad dressing (e.g. Italian or ranch dressing).

12.11 Salads (e.g. macaroni salad, potato salad) and sandwich spreads excluding cocoa- and nut-based spreads of food categories 4.19 and 5.1.3, and their sub-categories (if applicable)

Includes prepared salads, milk-based sandwich spreads, non-standardised mayonnaise-like sandwich spreads, and dressing for coleslaw (cabbage salad).

12.12 Yeast and like products

Includes baker's yeast and leaven used in the manufacture of baked goods. Includes the Oriental products *koji* (rice or wheat malted with *A. oryzae*) used in the production of alcoholic beverages.

12.15 Soy protein powders and mixes (for reconstitution (e.g. for soy beverage and home-made soft tofu))

Soy protein powder can be sold as is or as a mix (containing a coagulant that can be reconstituted by the consumer for preparing home-made soft tofu).

13 Beverages, excluding dairy products

This major category is divided into the broad categories of non-alcoholic (food categories 13.1 – 13.10) and alcoholic (food categories 13.11 – 13.17) beverages. This category does not include dairy-based beverages.

13.1 Fruit juice

Fruit juice is the unfermented but fermentable liquid obtained from the edible part of sound, appropriately mature and fresh fruit or of fruit maintained in sound condition by suitable means. The juice is prepared by suitable processes, which maintain the essential physical, chemical, organoleptical and nutritional characteristics of the juices of the fruit from which it comes. The juice may be cloudy or clear, and may have restored (to the normal level attained in the same kind of fruit) aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must have been recovered from the same kind of fruit. Pulp and cells obtained by suitable physical means from the same kind of fruit may be added. A single juice is obtained from one kind of fruit. A mixed juice is obtained by blending two or more juices or juices and purees, from different kinds of fruit. Fruit juice may be obtained by reconstituting concentrated fruit juice (food category 13.3) with water. Examples include: orange juice, apple juice, black currant juice, lemon juice, orange-mango juice and coconut water.

13.2 Vegetable juice

Vegetable juice is the liquid unfermented but fermentable product intended for direct consumption obtained by mechanical expression, crushing, grinding, and/or sieving of one or more sound fresh vegetables or vegetables preserved exclusively by physical means. The juice may be clear, turbid, or pulpy. It may have been concentrated and reconstituted with water. Products may be based on a single vegetable (e.g. carrot) or blends of vegetables



(e.g. carrots, celery).

### 13.3 Concentrates for fruit juice

Concentrated fruit juice is the product that complies with the definition given in food category 13.1. It is prepared by the physical removal of water from fruit juice in an amount to increase the Brix level to a value at least 50% greater than that established for reconstituted juice from the same fruit. In the production of juice that is to be concentrated, suitable processes are used, and may be combined, with simultaneous diffusion of the pulp cells or fruit pulp by water, provided that the water-extracted soluble fruit solids are added in-line to the primary juice, before the concentration procedure. Fruit juice concentrates may have restored (to the normal level attained in the same kind of fruit) aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must be recovered from the same kind of fruit. Pulp and cells obtained by suitable physical means from the same kind of fruit may be added. Sold in liquid, syrup and frozen forms for the preparation of a ready-to-drink juice by addition of water. Examples include: frozen orange juice concentrate, and lemon juice concentrate.

### 13.4 Concentrates for vegetable juice

Prepared by the physical removal of water from vegetable juice. Sold in liquid, syrup and frozen forms for the preparation of a ready-to-drink juice by addition of water. Includes carrot juice concentrate.

### 13.5 Fruit nectar

Fruit nectar is the unfermented but fermentable product obtained by adding water with or without the addition of sugar, honey, syrups, and/or sweeteners to fruit juice, concentrated fruit juice, fruit purees or concentrated fruit purees, or a mixture of those products. Aromatic substances, volatile flavour components, pulp and cells, all of which must have been recovered from the same kind of fruit and obtained by suitable physical means, may be added. Products may be based on a single fruit or on fruit blends. Examples include: pear nectar and peach nectar.

### 13.6 Vegetable nectar

Product obtained by adding water with or without the addition of sugar, honey, syrups, and/or sweeteners to vegetable juice or concentrated vegetable juice, or a mixture of those products. Products may be based on a single vegetable or on a blend of vegetables.

### 13.7 Concentrates for fruit nectar

Prepared by the physical removal of water from fruit nectar or its starting materials. Sold in liquid, syrup and frozen forms for the preparation of a ready-to-drink nectar by addition of water. Examples: pear nectar concentrate and peach nectar concentrate.

### 13.8 Concentrates for vegetable nectar

Prepared by the physical removal of water from vegetable nectar. Sold in liquid, syrup and frozen forms for the preparation of ready-to-drink nectars by addition of water.

13.9 Water-based flavoured drinks, including carbonated and non-carbonated varieties and concentrates, "sport", "energy" or "electrolyte" drinks, particulated drinks, ready-to-drink coffee and tea drinks and herbal-based drinks (e.g. iced tea, fruit-flavoured iced tea and chilled canned cappuccino drinks)

This sub-category includes:

(a) Carbonated water-based flavoured drinks:

Includes water-based flavoured drinks with added carbon dioxide with nutritive, non-nutritive and/or intense sweeteners and other permitted food additives. Includes *gaseosa* (water-based drinks with added carbon dioxide, sweetener, and flavour), and sodas such as colas, pepper-types, root beer, lemon-lime, and citrus types, both diet/light and regular types. These beverages may be clear, cloudy, or may contain particulated matter (e.g. fruit pieces). Includes so-called "energy" drinks that are carbonated and contain high levels of nutrients and other ingredients (e.g. caffeine, taurine, carnitine).

(b) Non-carbonated water-based flavoured drinks, including punches and ades:

Include water-based flavoured drinks without added carbon dioxide, fruit and vegetable juice-based drinks (e.g. almond, aniseed, coconut-based drinks, and ginseng drink), fruit flavoured ades (e.g. lemonade, orangeade), squashes (citrus-based soft drinks), capile groselha, lactic acid beverage, ready-to-drink coffee and tea drinks with or without milk or milk solids, and herbal-based drinks (e.g. iced tea, fruit-flavoured iced tea, chilled canned cappuccino drinks) and "sports" drinks containing electrolytes. These beverages may be clear or contain particulated matter (e.g. fruit pieces), and may be unsweetened or sweetened with sugar or a non-nutritive high-intensity sweetener. Includes so-called "energy" drinks that are non-carbonated and contain high levels of nutrients and other ingredients (e.g. caffeine, taurine, carnitine).

13.9.3 Concentrates (liquid or solid) for water-based flavoured drinks

Include powder, syrup, liquid and frozen concentrates for the preparation of carbonated or non-carbonated water-based non-alcoholic beverages by addition of water or carbonated water. Examples include: fountain syrups (e.g. cola syrup), fruit syrups for soft drinks, frozen or powdered concentrate for lemonade and iced tea mixes.

13.10 Coffee, coffee substitutes, tea, herbal infusions, and other hot cereal and grain beverages, including treated coffee beans for the manufacture of coffee products, excluding cocoa

Includes the ready-to-drink products (e.g. canned), and their mixes and concentrates. Examples include: chicory-based hot beverages (postum), rice tea, mate tea, and mixes for hot coffee and tea beverages (e.g. instant coffee, powder for hot cappuccino beverages). Treated coffee beans for the manufacture of coffee products are also included. This subcategory does not include cocoa mixes (food category 5.1.1).

13.11 Beer and malt beverages

Alcoholic beverages brewed from germinated barley (malt), hops, yeast, and water. Examples include: ale, brown beer, weiss beer, pilsner, lager beer, oud bruin beer,

Obergariges Einfachbier, light beer, table beer, malt liquor, porter, stout, and barleywine.

### 13.12 Cider and perry

Fruit wines made from apples (cider) and pears (perry). Also includes cider bouche.

### 13.13 Grape wines

Alcoholic beverage obtained exclusively from the partial or complete alcoholic fermentation of fresh grapes, whether crushed or not, or of grape must (juice), and includes:

#### (a) Still grape wine:

Grape wine (white, red, rosé, or blush, dry or sweet) that may contain up to a maximum 0.4g/100 ml (4000 mg/kg) carbon dioxide at 20 °C.

#### (b) Sparkling and semi-sparkling grape wines:

Grape wines in which carbonation is produced during the fermentation process, either by bottle fermentation or closed tank fermentation. Also includes carbonated wine whose carbon dioxide is partially or totally of exogenous origin. Examples include: spumante, and “cold duck” wine.

#### (c) Fortified grape wine, grape liquor wine, and sweet grape wine:

Grape wines produced either by: (i) the fermentation of grape must (juice) of high sugar concentration; or (ii) by the blending of concentrated grape juice with wine; or (iii) the mixture of fermented must with alcohol. Examples include: grape dessert wine.

### 13.14 Wines (other than grape, apple and pear) (e.g. rice wine (sake) and sparkling and still fruit wines)

Includes wines made from fruit other than grapes, apples and pears, and from other agricultural products, including grain (e.g. rice). These wines may be still or sparkling. Examples include: rice wine (*sake*), and sparkling and still fruit wines.

### 13.15 Mead

Alcoholic liquor made from fermented honey, malt and spices, or just of honey. Includes honey wine.

### 13.16 Distilled spirituous beverages containing more than 15% alcohol

Includes all distilled spirituous beverages derived from grain (e.g. corn, barley, rye, wheat), tubers (e.g. potato), fruit (e.g. grapes, berries) or sugar cane that contain greater than 15% alcohol. Examples include: aperitifs, brandy (distilled wine), cordials, liqueurs (including emulsified liqueurs), bagaceira belha (grappa from Portugal; bagaceira is a drink distilled from *bagaço* (pressed skins, seeds and stalks of the grapes)), eau de vie (a brandy), gin, grappa (Italian brandy distilled from the residues of pressed wine), marc (brandy distilled from grape or apple residue), korn (grain spirit (*schnapps*) of Germany, usually derived from rye (*Roggen*), sometimes from wheat (*Weizen*) or both (*Getreide*); also labelled as *Kornbrannt* or *Kornbranntwein*), mistela (also *mistelle* (France) and *jeropico* (South Africa); unfermented grape juice fortified with grape alcohol), ouzo (Greek spirit drink flavoured with aniseed), rum, tsikoudia (grape marc spirit from Crete), tsipouro (grape marc spirit from certain regions in Greece), wienbrand (style of grape brandy devised by Hugo Asbach, Rudesheim, Germany;

literally, “burnt wine”), *cachaça* (Brazilian liquor made from fermented distilled sugar cane juice), tequila, whiskey, and vodka.

#### 13.17 Aromatised alcoholic beverages (e.g. wine and spirituous cooler-type beverages and low-alcoholic refreshers)

Includes all non-standardised alcoholic beverage products. Although most of these products contain less than 15% alcohol, some traditional non-standardised aromatised products may contain up to 24% alcohol. Examples include aromatised wine, cider and perry; aperitif wines; americano; batidas (drinks made from *cachaça*, fruit juice or coconut milk and, optionally, sweetened condensed milk); bitter soda and bitter vino; clarea (also claré or clary; a mixture of honey, white wine and spices; it is closely related to *hippocras*, which is made with red wine); jurubeba alcoholic drinks (beverage alcohol product made from the *Solanum paniculatum* plant indigenous to the north of Brazil and other parts of South America); negus (sangria; a hot drink made with port wine, sugar, lemon and spice); sod, soft, and sodet; vermouth; zurra (in Southern Spain, a sangria made with peaches or nectarines; also the Spanish term for a spiced wine made of cold or warm wine, sugar, lemon, oranges or spices); *amazake* (a sweet low-alcoholic beverages (<1% alcohol) made from rice by *koji*; *mirin* (a sweet alcoholic beverage (<10% alcohol) made from a mixture of *shochuu* (a spirituous beverage), rice and *koji*); “malternatives,” and prepared cocktails (mixtures of liquors, liqueurs, wines, essences, fruit and plant extracts, etc. marketed as ready-to-drink products or mixes). Cooler-type beverages are composed of beer, malt beverage, wine or spirituous beverage, fruit juice(s), and soda water (if carbonated).

#### 14 Ready-to-eat savouries

Includes all types of savoury snack foods.

##### 14.1 Snacks – potato, cereal, flour or starch based (from roots and tubers, pulses and legumes), including all plain and flavoured savoury snacks (e.g. potato chips, popcorn and flavoured crackers), excluding plain crackers of food category 7.1.2 and its sub-categories (if applicable)

Includes all plain and flavoured savoury snacks, but excludes plain crackers (food category 7.1.2). Examples include potato chips, popcorn, pretzels, rice crackers (*senbei*), flavoured crackers (e.g. cheese-flavoured crackers), *bhujia* (*namkeen*; snack made of a mixture of flours, maize, potatoes, salt, dried fruit, peanuts, spices, colours, flavours, and antioxidants), and *papads* (prepared from soaked rice flour or from black gram or cow pea flour, mixed with salt and spices, and formed into balls or flat cakes).

##### 14.2 Processed nuts, including coated nuts and nut mixtures (with e.g. dried fruit)

Includes all types of whole nuts processed by, e.g. dry-roasting, roasting, marinating or boiling, either in-shell or shelled, salted or plain. Yoghurt-, cereal-, and honey-covered nuts, and dried fruit-nut-and-cereal snacks (e.g. “trail mixes”) are classified here. Chocolate-covered nuts are classified in food category 5.1.4.

14.3 Snacks – fish based, excluding dried fish snacks of food category 9.2.6 and dried meat snacks of food category 8.3.2 and their sub-categories (if applicable)

This describes savoury crackers with fish, fish products or fish flavouring. Dried fish *per se* that may be consumed as a snack is assigned to food category 9.2.6, and dried meat snacks (e.g. beef jerky, pemmican) are assigned to food category 8.3.2.

15 Miscellaneous

This food category comprises of food additives, flavourings and flavouring syrups, enzymes, essential oils and isolates from the concentrates of essential oils, liquid foam headings, gelatin, gelatin capsules, silicone antifoam emulsion, liquid pectin and partial glycerol esters.

## 4. Frequently Asked Questions

### 4.1 How are preservatives and antioxidants regulated in Hong Kong?

In Hong Kong, most food safety related rules and regulations are contained in Part V of the Public Health and Municipal Services Ordinance, Cap. 132. The Ordinance stipulates that all food on sale must be wholesome, unadulterated and fit for human consumption. There is also a set of subsidiary legislation which spells out the standards for specific food products or substances allowed in food. The control on the use of preservatives and antioxidants in food is governed by the Preservatives in Food Regulations, Cap. 132BD, which stipulate that any food being imported, manufactured for sale, or sold should only contain permitted preservatives or antioxidants and in the proportion that does not exceed the maximum permitted levels. In 2008, the Preservatives in Food (Amendment) Regulation 2008 amended Cap. 132BD. Details of the legislation are available at the website [www.legislation.gov.hk](http://www.legislation.gov.hk).

### 4.2 What are preservatives and antioxidants as defined in the Amendment Regulation?

According to the Amendment Regulation, “Preservative” means any substance which is capable of inhibiting, retarding or arresting the process of fermentation, acidification or other deterioration of food or of masking any of the evidence of putrefaction but does not include –

- (a) any permitted colouring matter;
- (b) common salt (sodium chloride);
- (c) lecithin, sugars or tocopherols;
- (d) nicotinic acid or its amide;
- (e) vinegar or acetic acid, lactic acid, ascorbic acid, citric acid, malic acid, phosphoric acid, polyphosphoric acid or tartaric acid or the calcium, potassium or sodium salts of any of the acids specified in this paragraph;
- (f) glycerol, alcohol or potable spirits, isopropyl alcohol, propylene glycol, monoacetin, diacetin or triacetin;
- (g) herbs or hop extract;
- (h) spices or essential oils when used for flavouring purposes;
- (i) any substance added to food by the process of curing known as smoking;
- (j) carbon dioxide, nitrogen or hydrogen when used in the packing of food in hermetically sealed containers;
- (k) nitrous oxide when used in the making of whipped cream; or
- (l) glucose oxidase derived from *Aspergillus niger* var.

According to the Amendment Regulation, “Antioxidant” means any substance that protects food against deterioration caused by oxidation (including fat rancidity and colour changes) but does not include –

- (a) lecithin;

- (b) ascorbic acid or salts or esters of ascorbic acid;
- (c) tocopherols;
- (d) erythorbic acid, citric acid, tartaric acid, phosphoric acid, lactic acid or the calcium, potassium or sodium salts of any such acid;
- (e) calcium, potassium or sodium salts of gluconic acid;
- (f) acetic and fatty acid esters of glycerol, lactic and fatty acid esters of glycerol or citric and fatty acid esters of glycerol; or
- (g) glucose oxidase derived from *Aspergillus niger* var.

#### **4.3 How can I know whether a particular preservative or antioxidant can be used in a food product in Hong Kong?**

The Amendment Regulation stipulates which preservatives and antioxidants are permitted in food, as well as conditions of use including the maximum permitted levels in food. Schedule 1 to the Amendment Regulation is organised into 4 columns. Column 1 lists the food categories or sub-categories, Column 2 lists specific names of the permitted preservatives/antioxidants and their International Numbering System for Food Additives (INS) numbers, Column 3 states the maximum permitted levels at which certain preservatives and antioxidants may be present in food and Column 4 gives additional specifications on the usage of permitted preservatives and antioxidants imposed in certain food categories. In other words, preservatives or antioxidants must not be added to a food unless expressly permitted by law and they need to observe all the conditions stipulated in the Amendment Regulation.

#### **4.4 What are the major amendments made in the Amendment Regulation?**

The major amendments include the following: -

- (a) Amendment of the definition of antioxidant. In the Amendment Regulation, protection against colour changes caused by oxidation is included as one of the functions of antioxidants.
- (b) Incorporation of those preservatives and antioxidants, as well as their permitted levels of use, in the Codex General Standard for Food Additives (GSFA) into the Amendment Regulation, with modification to suit the local situation;
- (c) Combining Part I and Part II of the First Schedule to Cap. 132BD to cater for the multi-functional properties of some preservatives and antioxidants; and
- (d) Adoption of a food category system based on the GSFA. This amendment reflects the international trend of removing away from the so-called 'product-specific' legislation to horizontal provisions, which apply to all food types.

#### **4.5 Is there any transitional period allowed upon the commencement of the Amendment Regulation?**

In adopting the amendments, the Legislative Council agreed to a two-year transitional period. During this two-year transitional period, it is legally in order for any single food item to comply with the relevant standards in either the existing Cap. 132BD or the amended Regulation. Complying partly with Cap. 132BD and the Amendment Regulation is not acceptable. After this transitional period, all food sold in Hong Kong shall have to comply with the Amendment Regulation. The transitional period begins on 1 July 2008 and ends on 30 June 2010 (both dates inclusive).

#### **4.6 What are the additional preservatives and antioxidants permitted for food use in the Amendment Regulation?**

There are eleven additional preservatives and antioxidants permitted for food use in the new standards. These are:-

- guaiac resin
- isopropyl citrates
- stannous chloride
- tertiary butylhydroquinone (TBHQ)
- thiodipropionic acid
- dimethyl dicarbonate
- ferrous gluconate
- formic acid
- hexamethylene tetramine
- lysozyme
- pimaricin

All these additional preservatives and antioxidants are permitted for food use in the Codex General Standard for Food Additives (*CODEX STAN 192-1995, Revision 2007*). These food additives have been evaluated by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and found acceptable for use in foods.

#### **4.7 Some food additives such as acetic acid, ascorbic acid and tocopherols are considered to be preservatives or antioxidants in the Codex General Standards for Food Additives, but they are not included in the definitions of preservative or antioxidant in the Amendment Regulation. Are these food additives permitted for food use?**

Acetic acid, ascorbic acid and tocopherols, considered to be preservatives and/ or antioxidants in the GSFA, are not included in the definition of preservative or antioxidant under Section 2 of the Amendment Regulation. They are therefore excluded from the scope of the Amendment Regulation and are allowed for use in foods in general. The use of such



substances however must comply with other relevant legislation in Hong Kong, including the Public Health and Municipal Services Ordinance, Cap 132 and the Food and Drugs (Composition and Labelling) Regulations, Cap. 132W. Their uses also need to observe the general provision that all food sold must be fit for human consumption. In addition, traders should use these food additives in accordance with good manufacturing practice.

Examples of these food additives include:-

- lecithin
- ascorbic acid, or its salts or esters (such as ascorbyl palmitate and ascorbyl stearate)
- tocopherols
- acetic acid, malic acid, erythorbic acid, lactic acid, citric acid, tartaric acid, phosphoric acid or their calcium, potassium or sodium salts
- calcium, potassium or sodium salts of gluconic acid;
- acetic and fatty acid esters of glycerol, lactic and fatty acid esters of glycerol, citric and fatty acid esters of glycerol
- glucose oxidase derived from *Aspergillus niger* var.

#### **4.8 If I add tocopherols or acetic acid in the food during production, do I need to label them and their functional classes on pre-packaged food?**

Although tocopherols and citric acid are not regulated under the Amendment Regulation, they should be labelled by listing their respective functional classes if they are added to serve the functions as preservatives or antioxidants in the food, e.g. “Antioxidant” and “Preservative”. In addition,, either their full names or specific identification numbers under the International Numbering System of Food Additives (INS Number) should also be listed out, e.g. “Antioxidant (tocopherols) or “Antioxidant (307)” and “Preservative (acetic acid) or “Preservative (260)”. Such requirements are stipulated in the Food and Drugs (Composition and Labelling) Regulations, Cap.132W.

#### **4.9 In the Amendment Regulation, the level of use of a preservative or antioxidant in a food is known as ‘maximum permitted level’. What does it mean?**

The Amendment Regulation restricts the level at which certain preservatives and antioxidants may be present in food. The ‘maximum permitted level’ is the greatest proportion of a preservative or antioxidant allowed to be present in the relevant food. It is generally expressed as mg “additive”/ kg of “food”. However, there are some exceptions. For example, pimaricin in cheese and meat is expressed as mg “additive”/ dm<sup>2</sup> (surface area) of “food”. Unless otherwise specified, all the maximum permitted levels for preservatives and antioxidants indicated in the Amendment Regulation refer to the levels in food as sold.

Food manufacturers should notice that the ‘maximum permitted level’ may not correspond to the optimum, recommended, or typical level of use. Under Good Manufacturing Practice,

the optimum, recommended, or typical use level will differ for each application of a food additive and is dependent on the intended technical effect and the specific food in which the food additive would be used, taking into account the type of raw material, food processing and post-manufacture storage, transport and handling by distributors, retailers, and consumers. Hence, food manufacturers should ensure that the quantity of a food additive added to food does not exceed the maximum permitted use level and is the lowest possible level necessary to accomplish the desired effect of adding it.