Chapter 1

General Provisions

Chapter 1. General Provisions

1. General Principles

Unless otherwise provided in this Notification, the following general provisions shall apply.

1) The scope and coverage of this Notification shall be as follows:

A) Standards for food ingredients; Standards for Methods of Food Manufacturing/ Processing/Use/Preparation and Preservation; Specifications for Food Components; and Test Methods for Standards/Specifications pursuant to Article 7(1) of the Food Sanitation Act;

B) Standards for Food/Food Additives; Standards for Food Apparatus/Containers/Packages pursuant to the provisions of Article 10(1) of the Food Sanitation Act; and Standards for Labeling of Genetically Modified Foods under Article 12-2(1);

C) Standards for Processing/Packaging/Storing and Distributing Livestock Products; Specifications of Ingredients of Livestock Products; and Standards for Sanitation Grade of Livestock Products pursuant to Article 4(2) of the Livestock Products Sanitary Control Act.

2) For the purpose of this Notification, processed foods are classified by Food Group (main category), Food Class (category) and Food Type (subcategory).

Food Group : A main category of foods under "Chapter 4. Standards and Specifications for Each Food Product," such as beverages and seasoning foods, etc.

Food Class : A category of foods under a food group, such as teas; fruit/ vegetable beverages; vinegars; and hams, etc.

Food Type : A subcategory of foods under a food class, such as concentrated fruit/vegetable juice; fruit/vegetable juice; fermented vinegar; and diluted acetic acid, etc.

3) As a rule, conformance to the Standards and Specifications provided in this Notification shall be determined according to the test methods set forth in this Notification; provided, however, that more precise and accurate methods may be

used other than those specified in this Notification, and commercial kits or equipments may be used for testing microorganisms and toxins, etc.; except that the results that are deemed questionable shall be tested and determined in accordance with the methods set forth herein.

4) Conformance of other matters for which the standards and specifications are not established in this Notification may be provisionally determined by the Minister of Food and Drug Safety after he/she comprehensively reviews relevant data for each matter, such as provisions of the CODEX Alimentarius Commission (CAC) or major foreign standards/specifications and Acceptable Daily Intake (ADI) and intake of the corresponding food.

5) Foods for which a specific test method is not provided in “Chapter 4. Standards and Specifications for Each Food Product” in this Notification, shall be tested according to the corresponding test methods under “Chapter 7. General Test Methods;” whereas those for which no standards or specifications are specified in this Notification, or no test method is provided even if the standards or specifications exist therein, may be tested according to the test methods approved by the Minister of Food and Drug Safety or other methods such as CODEX Alimentarius Commission (CAC) provisions; Association of Official Analytical Chemists (AOAC); International Standard Organization (ISO); and Pesticide Analytical Manual (PAM), etc. For those not specified in any of the above methods, test may be conducted according to the methods set forth in other laws or internationally recognized and accredited test methods; and such test methods shall be presented.

6) The following abbreviations of the International System of Units (SI) shall be used as units of measurement, etc.

① Length： m, cm, mm, μm, nm

② Volume： L, mL, μL

③ Weight： kg, g, mg, μg, ng, pg

④ Area： cm2

⑤ Calorie： kcal, kj

⑥ Crushing Strength: N (Newton)

⑦ Temperature: ℃

7) The standard temperature shall be 20℃; normal temperature shall be between 15~25℃, room temperature shall be between 1~35℃; and tepid temperature shall be between 30~40℃, respectively.

8) Weigh percentage shall be indicated in %; however, the material content (g) in 100 mL solution shall be expressed as w/v%; and the material content (mL) in 100 mL solution as v/v%. Weight parts-per-million (ppm) should be indicated in mg/kg and may also be expressed as ppm or mg/L, as applicable. Weight parts-per-billion (ppb) should be indicated in μg/kg and may also be expressed as ppb or μg/L, as applicable.

9) Radionuclides to be managed in the event of radioactive leakage shall be selected according to the following principles:

   (1) Released radionuclides shall be selected first for radio iodine and cesium which are typical indicator contaminants; and subsequently selected according to the type of radioactive release accident.

   (2) In cases where radio iodine or cesium is detected, other contamination may be identified additionally, such as contamination by plutonium, strontium and other nuclides (hereinafter referred to as “Other”). Also, other nuclides may be selected and applied in full or in part after being comprehensively reviewed for possible release to an environment, half-life, and harm to human body, etc.

   (3) The standards for other nuclides shall apply for one year after the end of the accident when no leakage of radioactive substances exists.

   (4) In cases of difficulty in conducting precision tests for other nuclides, non-contamination certificates may be submitted in lieu of such test.

10) Anyone who intends to establish, revise or be exempted from the maximum residue limits for pesticide or veterinary drug in food shall apply in accordance with Annex 6 “Guidelines on Setting Maximum Residue Limites for Pesticide and Veterinary Drug in Food.”

11) As a rule, the standards for harmful contaminants shall be set according to the ALARA (As Low As Reasonably Achievable) principle by taking into account the total human exposure; risk level; and share of exposure due to the contamination degree and intake of harmful contaminants in food.

12) Unless specifically provided otherwise, the tests set forth in this Notification shall comply with the following principles:

(1) Atomic weights and molecular weights shall be calculated according to the latest International Table of Atomic Weights.

(2) Unless specifically provided otherwise, cold water is defined as water at a temperature of 15℃ or lower; warm water, as water at a temperature between 60~70℃; and hot water, as water at a temperature approximately 100℃.

(3) Unless specifically provided otherwise, “boiling water or heating in water,” means heating at a temperature approximately 100℃; provided that steam at a temperature approximately 100℃ may also be used instead of water.

(4) Unless specifically provided otherwise, the water used for tests shall be distilled or purified water.

(5) A solution without indication of a specific solvent means a water-based solution.

(6) Unless specifically provided otherwise, decompression shall not exceed 15 mmHg.

(7) Those indicated as acid, alkaline and neutral pH shall be tested using litmus paper or pH-meter (glass electrode). Also, strongly acidic means having a pH value of less than 3.0; weakly acidic, having a pH value of 3.0 or more and less than 5.0; mildly acidic, having a pH value of 5.0 or more and less than 6.5; neutral, having a pH value of 6.5 or more and less than 7.5; mildly alkaline, having a pH value of 7.5 or more and less than 9.0; weakly alkaline, having a pH value of 9.0 or more and less than 11.0; strongly alkaline, having a pH value of 11.0 or more.

(8) A solution concentration expressed as (1→5), (1→10) and (1→100), etc. means that a solid reagent of 1g or a liquid reagent of 1mL is dissolved in a solvent to produce 5 mL, 10 mL and 100 mL solution, etc., in total, respectively. In addition, an expression, such as (1+1) or (1+5) means a mixing ratio where 1 g of solid reagent or 1 mL of liquid reagent is dissolved in 1 ml or 5 ml solvent. Water shall be used as a solvent for dilution unless otherwise provided.

(9) A mixed solution expressed as (1 : 1) or (4 : 2 : 1), etc., means mixing

volume ratio of the liquid reagent or mixing weight ratio of the solid reagent.

(10) In measuring the number of water drops, a measuring instrument shall be used in such a manner that the weight of 20 drops of distilled water shall be between 0.90 and 1.10 g when dropped at a temperature of 20℃.

(11) In the case of using a Nessler tube, it should be a 50 mL clear glass test tube with a flat bottom; it should have an internal diameter of 20 mm and an external diameter of 24 mm; and a length from the bottom to the stopper should be 20 cm. The difference between scales on each tube shall not be more than 2 mm.

(12) Unless otherwise specified, silica gel (silicon dioxide) shall be used as a desiccant in a desiccator.

(13) Unless otherwise specified, test shall be conducted at normal temperature, and observed within 30 seconds after manipulation; provided, however, that those affected by temperature shall be tested at standard temperature.

(14) The term, “precisely measuring” weight means weighing to an accuracy of 0.1 mg, 0.01 mg or 0.001 mg. Also, “accurately measuring” weight means measuring the specified weight to the specified decimal place.

(15) The size of samples expressed as “approximately” means that 90~110% of the specified amount is to be taken unless otherwise specified.

(16) In the case of drying or heating, the term “constant weight” means that the weight difference between before and after heating is not more than 0.1% of the previously measured weight after continuous drying or heating for an additional 1 hour.

2. Application of Standards and Specifications

The Standards and Specifications shall be applied to the food and food additives specified in this Notification (hereinafter “foods, etc.”) in accordance with the following:

1) With regard to the foods individually specified in “Chapter 4. Standards and Specifications for Each Food Product,” the corresponding Standards and Specifications shall apply preferentially.

2) Foods, etc. shall conform to the “Chapter 2. Common Standards and Specifications for General Foods.” However, when the necessity is insufficient or effectiveness is low in light of food characteristics, such Standards and Specifications may selectively apply according to its importance.

3) Long shelf-life foods shall meet the Standard and Specification set forth in paragraph 1) and “Chapter 3. Standards and Specifications for Long Shelf-life Foods” (except for non-heated products among meat, processed meat-containing products or processed fish meat products). In cases of duplicate provisions in the Standards and Specification, the stricter provision shall apply.

4) The standards for contaminants in processed foods, such as heavy metals, mycotoxins and shellfish poisons, etc., may apply within the scope of the standard for each ingredient. That is, standards for agricultural/forest/livestock/fishery products shall apply to the food according to the content of each ingredient; when the water content changes due to a process, such as drying, etc., such water content shall be considered upon application of the standards.

5) The specification limit between “a ~ b” means “a or more and b or less.”

6) When comparing a specified value (referred to as specification limit) and the value obtained from the test (referred to as experimental value) to determine conformance, the experimental value shall be measured to one more decimal place and rounded to the same decimal place as the specification limit; and compared with the specification limit to determine conformance.

7) During tests with a limit of quantification (LOQ), such as tests for pesticide and veterinary drug residues in Food, etc., as specified in this Notification, residues

detected less than the LOQ shall be treated as non-detected.

8) In the event that multiple test samples are requested in the same condition pursuant to “Chapter 6. Sampling and Handling Methods” in this Notification, the entire samples shall be treated as nonconforming if one or more samples do not conform to the requirement,

9) For the purpose of this Notification, “tar color” means Food Green No.3 and its Aluminium Lake; Food Red No.2 and its Aluminum Lake; Food Red No.3; Food Red No.40 and its Aluminium Lake; Food Red No.102; Food Blue No.1 and its Aluminium Lake; Food Blue No.2 and its Aluminium Lake; Food Yellow No.4 and its Aluminium Lake; and Food Yellow No.5 and its Aluminium Lake.

10) For the purpose of this Notification, “preservatives” means “Sodium dehydroacetate; Sorbic acid and its salts (potassium, calcium); Benzoic acid and its salts (sodium, potassium and calcium); (methyl and ethyl) Parahydroxy benzoate; and Propionic acid and its salts (sodium and calcium).”

11) For the purpose of this Notification, “antioxidant” means “Butylated Hydroxy Toluene; Butylated Hydroxy Anisol; tert-Butylhydroquinone; Propyl Gallate; Disodium Ethylenediamine-tetraacetate; Calcium Disodium Ethylenediaminetetraacetate.”

12) The standard sugar content (Brix°) of 100% fruit/vegetable juice shall be as follows:

(1) Mangoes: Not less than 13°

(2) Pineapples: Not less than 12°

(3) Grapes, Orange and European Pears: Not less than 11°

(4) Apples or Limes: Not less than 10°

(5) Mandarin oranges, Grapefruits, Papayas: Not less than 9°

(6) Pears, Watermelons, Guavas: Not less than 8°

(7) Peaches, Apricots, Strawberries and Lemons: Not less than 7°

(8) Plums, Melons, Japanese apricots: Not less than 6°

(9) Tomatoes: Not less than 5°

(10) Others: Follow the references.

3. Explanations of Terms

1) “Definition” prescribes an individual food; and foods that are not classified as a “food type” may also be subject to applicable Standards and Specifications for such individual food if they conform to its “definition.” However, in the event that separate Standards and Specifications are set for those foods, such Standards and Specifications shall apply preferentially.

2) “A, B, C, … etc.” is a concept of listing commonly used items as examples and including other related ones.

3) “A or B” may be interpreted as “A and B,” “A and/or B,” or “only A” or “only B”; the same shall apply to “A, B, C or D.”

4) “A and B” shall satisfy both A and B simultaneously.

5) “Adequate ○○ procedures (process)” means a necessary procedure (process) for manufacturing and processing foods; and refers to generally and widely used methods or scientifically proven methods, achieving safety and integrity of foods.

6) “Foods and Food additives shall meet the corresponding Standards and Specifications.” means that they shall conform to the applicable Standards and Specifications.

7) “Shall be stored” means food shall be stored in a manner that maintains its maximum quality by considering its ingredients and properties.

8) “To the extent possible,” “recommended” or “may” means recommendations that are set in order to induce quality and sanitation level improvement.

9) “Methods with equal or better effect” means methods, other than those specified, that are generally and widely used or scientifically proven and that are capable of maintaining hygienic, nutritional and organoleptic quality.

10) For the purpose of definitions and food type, “○○%,” “not less than ○○%,” “not more than ○○%” and “less than ○○%” indicate the standards for mixing ingredients or components.

11) “Specific components” means an ingredient used in processed foods and an edible part of a single food pursuant to “Chapter 1. 4. Classification of Food Ingredients, etc.”

12) “Dry (solid) matter” means the solids that remain after drying of ingredients

and that have a water content of not more than 15% unless otherwise specified.

13) “Solid food” means food with a definite shape and volume.

14) “Liquid or liquid food” means food in a fluid or liquid state that is concentrated as it is.

15) “Pills” means foods made into a small spherical shape.

16) “Granules” means foods made in a granular shape.

17) “Powder” means a particle with a size smaller than that of granules.

18) “Fried or oil treated foods” means foods manufactured/processed by frying or spraying with edible oil and fat after shaping them in the manufacturing process.

19) “Alcohol treatment” means a method of soaking or spraying on products using ethyl alcohol in the manufacturing process for the purpose of pasteurization.

20) “Expiration date” refers to the period of which a product can be sold to consumers

21) “Finished products” means finished products in a manufacturing and packaging process, ready for distribution and sale.

22) “Specifications” means specifications for end products.

23) “Shall not be detected” means not to be detected by tests specified in this Notification.

24) “Ingredients” refers to materials that are used to manufacture foods, including edible animals; plants; or processed animals and plants; food additives permitted under “Standards and Specifications for Food Additives;” and processed foods used to manufacture other foods.

25) “Main ingredients” means ingredients used to characterize and differentiate from other foods by considering each food’s main use and characteristics, etc.

26) “Simple extracts” means extracts (including juice extraction) from ingredients, obtained physically or by using solvents (water, ethyl alcohol, carbon dioxide), and where specific components are not removed or separated.

27) “Ingredients approved for limited use in food” means food ingredients with conditions for use in food.

28) “Ingredients prohibited for use in food” means ingredients that shall not be used for manufacturing/processing/preparing food, other than those specified in Chapter 2. 1. 2) (6) and (7).

29) “Derived from ingredients” means ingredients that conform to the applicable Standards and Specifications, or those inevitably derived from ingredients of satisfactory quality; which may be approved if proven by officially approved data or documents.

30) “Satisfactory quality and freshness” of ingredients means, in case of agricultural/forest products, those made fit for human consumption by removing bruised or damaged part; in case of fishery products, those conforming to the “Specifications for Fishery Products;” in case of marine algae, those with shapes and colors that are not damaged to the extent that their types can be recognized by appearance; and in case of agricultural/forest/livestock/fishery products and processed foods, those conforming to the Standards and Specifications set forth in this Notification.

31) “Inedible parts” means certain parts of ingredients that are usually not consumed as food, including those of which the original quality becomes spoiled or damaged due to inadequate processing in a manufacturing process, such as edible parts that are damaged or insect-damaged, etc.

32) “Foreign matters” means substances other than components of normal food, including—as animal substances—arthropods and their eggs, larvae and excreta; traces of rodents and insects; and animal fur, excreta, parasites and their eggs, etc.—as vegetable substances—different kinds of plants and their seeds; mold; straw; and chaff; etc.; and—as mineral substances—soil, sand, glass, metal and pot shards, etc.

33) “Bivalves” means shellfish with two shells, such as clams, oysters, blue mussels, scallops, mussels, ark shells, comb pen shells, egg cockles, sunray surf clams, surf clams, jackknife clam, corbiculae, Filipino venus, purple Washington clam, etc.

34) Unless otherwise specified in this Notification, “refrigeration” or “freezing” means a temperature between 0~10°C; or that of -18°C or below, respectively.

35) “Cold and dark places” or “cool and dark places” means places at a temperature between 0~15°C, without sunlight.

36) “Refrigeration/freezing temperature measurement value” means the highest temperature measured inside a refrigerator/freezer or cool/cold storage equipment, etc.

37) “Pasteurization” means, unless otherwise specified, inactivating and reducing vegetative cells of microorganisms, such as bacteria, yeasts and molds, etc.

38) “Sterilization” means, unless otherwise specified, destroying vegetative cells of microorganisms and spores.

39) “Hermetic sealing” means blocking the passage of air through a container or package.

40) “Supercritical extraction” means extracting edible components from food ingredient or food using carbon dioxide at the critical temperature and pressure or higher.

41) “Deep sea” means the part of the ocean with a depth of not less than 200 m where sunlight cannot reach.

42) “Processed food” means foods manufactured, processed and packaged by: adding food or food additives to food ingredients (agricultural, forest, livestock, or fishery products, etc.); transforming into unrecognizable forms (grinding or cutting, etc.); mixing such transformed ones; or adding food or food additives to such mixture. However, this excludes the agricultural/forest/animal/fishery products that are simply cut, peeled, salted, ripened, or heated (except for the purpose of pasteurization or where such treatment causes significant changes to the ingredients) without using food additives or other ingredients, to the extent that their original forms can still be recognized; provided that during such process, there are no concerns about sanitary risks and that the quality of food can be identified organoleptically.

43) “Food irradiation treatment” means exposing foods to gamma rays or energy released from an electron beam accelerator, using a radiation method for anti-sprouting, pasteurization, insect control, or ripening control. According to the type of radiation, intended use, or treatment method (irradiation), it may be classified into gamma ray pasteurization; electron beam pasteurization; gamma ray insect control; electron beam insect control; gamma ray irradiation; and electron beam irradiation—or collectively, radiation pasteurization; radiation insect control; and radiation irradiation, etc.

44) “Meat” means dressed carcass, fresh meat, internal organs and other parts of animal ingredients intended for human consumption. “Dressed carcass” is defined as carcass with heads, tails, feet and internal organs removed; “fresh meat,” as meat from dressed carcass with the bones removed; “internal organs,” as liver, lungs, heart, stomach, pancreas, spleens, kidneys, small and large intestines, etc., processed for human consumption; and “other parts,” as any edible parts, such as heads, tails, feet, skin, blood, etc., derived and produced from animals slaughtered for human consumption.

45) “Long shelf-life foods” means canned/bottled foods, retort pouch foods and frozen foods that are manufactured and processed to allow long shelf-life or preservation.

46) “Food processing water” means water used in the manufacture, processing and preparing of foods.

47) “Ginseng,” “red ginseng,” or “black ginseng” means as specified in the “Ginseng Industry Act;” “wood-cultivated ginseng” means as specified in the “Forestry and Mountain Villages Development Promotion Act.”

48) “*Hangwa* (Korean traditional confectioneries)” mainly refers to grains, fruits or nuts, etc. coated with honey, taffy, or sugar, etc., including *yugwa* (oil-and-honey pastry), *yakgwa* (deep-fried honey cookies) and *jeongkwa* (candied fruits), etc.

49) “Slush” refers to a drink made into a shaved ice-like state after directly mixing packaged beverages, such as soft drinks, etc., or water and powdered juice, etc.; or frozen into a semi-icy state by using an ice cream maker.

50) “Cocoa solids” means cocoa mass, cocoa butter, or cocoa powder; and “non-fat cocoa solids” means the remaining cocoa solids left after removing fat.

51) “Milk solids” means a mix of milk fat and non-fat milk solids.

52) “Milk fat” means the fat obtained from milk.

53) “Blood-containing eggs” means eggs with blood spread in egg contents.

54) “Blood spots” means the blood spots caused by the rupture of a tiny blood vessel on the yolk surface when a yolk is released.

55) “Meat spots” means blood spots that have lost their characteristic red color or small pieces of oviduct tissues.

56) “Hairline-cracked eggs” means eggs with cracked or broken shells but intact shell membranes, and thereby no leakage of contents.

57) “Contaminated eggs” means eggs whose egg shell is not broken but has noticeable stains or foreign matters on it, such as excrement, blood, egg contents and feathers, etc. on its surface.

58) “Soft-shelled eggs” means eggs whose shell membranes are not broken but unable to securely maintain its shape due to thin egg shells.

59) “Frozen edible fish heads” means the heads of cods (*Gadus morhua*, *Gadus ogac*, *Gadus macrocephalus*), Southern hake (*Merluccius australis*), tunas and patagonian toothfish (*Dissostichus eleginoides*, *Dissostichus mawsoni*), that are cut off, along with pectoral and ventral fins attached to the heads; and the edible parts that are separated from all types of edible fishes (except puffers); both of which are quick-frozen until the temperature at the center drops to -18°C or below and processed to make them fit for human consumption.

60) “Frozen edible fish viscera” means edible fish roe (except puffer roe), pollack intestines, milts (hard roe), and squid nidamental glands, etc., that are taken from fish; quick-frozen until the temperature at the center drops to -18°C or below; and processed to make them fit for human consumption.

61) “Raw oysters” means packaged oysters (including frozen oysters) that can be eaten raw, such as shelled oysters, half-shelled oysters and no-shelled oysters.

62) Terms (n, c, m, M) used in microorganism specifications shall be as follows:

(1) n: the number of test samples

(2) c: The maximum number of samples allowed; the number of samples exceeding the allowable limit (m) but not more than the maximum allowable limit (M); if the number of samples that exceed “m” but not more than “M” is not more than “c”, the results is determined to be conforming.

(3) m: The allowable limit of microorganisms; if all samples are not more than “m,” the result is determined to be conforming.

(4) M: The maximum limit of microorganisms allowed; if one or more samples exceed M, the result is determined to be non-conforming.

※ Colony Forming Unit (CFU) per 1 g or 1 mL, unless specifically stated

otherwise in m and M.

63) “Infants” means persons under 12 months of age.

64) “Young children” means persons from 12 months to 36 months of age.

4. Classification of Food Ingredients

The following is a general classification of food ingredients; depending on the characteristics and purpose of the applicable foods or ingredients, this classification may not apply.

1) Ingredients of Plant Origin

Main category	Subcategory	Commodity
Cereal grains	-	rice, barley, wheat, buckwheat, millet, sorghum, corn, oat, rye, Job's tears, proso millet, Japanese millet, quinoa, triticale, etc.
Tuberous and corm vegetables	-	potato, sweet potato, taro, East Asian mountain yam, cassava (tapioca), konjac, etc.
Pulses	-	soy bean, mung bean, pea, kidney bean, cowpea, red bean, broad bean, pigeonpea, lima bean, chickpea, green bean, lentil, sword bean, etc.
Nuts and Seeds	Peanut or nuts	chestnut, walnut, gingko nut, pine nut, peanut, almond, pecan, cashew nut, hazelnut, macadamia, pistachio, acorn, etc.
	Oilseeds	sesame seed, sunflower seed, pumpkin seed, perilla seed, olive, evening primrose seed, cotton seed, rapeseed (canola), palm, safflower seed, etc.
	Seeds for beverage and sweets	coffee bean, cacao bean, cola nut, guarana
Fruits	Pome fruits	apple, pear, quince, persimmon, pomegranate, etc.
	Citrus fruits	mandarin orange, orange, grapefruit, lemon (including lime), Asian citron, kumquat, trifoliate orange, citron, etc.
	Stone fruits	peach, jujube, apricot, plum, Japanese apricot, cherry, Chinese bush cherry, Japanese cornelian cherry, five-flavor magnolia vine (*Schisandrac hienesis*), etc.

	Berries and other small fruits	grape, strawberry, fig, mulberry, cowberry, currant, blueberry, rasberry, cranberry, Chinese matrimony vine, crimson glory vine, Korean black blackberry (including Korean raspberry, raspberry), five-leaf chocolate vine, etc.
	Tropical fruits	banana, pineapple, kiwifruit (golden kiwi), avocado, papaya, date palm, mango, guava, coconut, lychee, passion fruit, durian, mangosteen, longan, etc.
Vegetables	Flowerhead brassicas	Korean cabbage, cabbage, broccoli, etc.
	Leafy vegetables	Korean spring cabbage (Including *Ssam* cabbage, *Bomdong*, etc.), lettuce, cabbage lettuce, spinach, perilla leaves, crown daisy, curled mallow, leaf beet, butterbur, radish (including young radish, leaves, etc.), Edible aster (*fischer's ragwort*, *chamchw*i (Rough aster), *Asian goldenrod*), pepper leaves, *Chamnamul* (*Pimpinella brachycarpa* (Kom.) Nakai), kale, Chinese cabbage, leaf mustard, shepherd's purse, common chicory (leaves), endive, parsely, pumpkin young leaves, *Shinsuncho* (Angelica keiskei), Korean wasabi (leaves), edible amaranth, toothed ixeridium, burdocks leaves, leaf mustard, toscano leaf, *Dacheongchae* (a type of Chinese cabbage), *Danggi leaf* (Korean angelica), mugwort, Korean solomon's seal (leaves), mulberry leaves, bird rape, *chunchae* (spring greens), sonchus-leaf crepidiastrum, Slender-leaf Indian lettuce, dandelion, beach silvertop, Korean thistle (*Gondre namul*), ulleungo aster, ussuri thistle, alpine braod-leaf allium, tat soi, day lily, East Asian wildparsley, stonecrop, beet greens, etc.
	Leaf and stem vegetables	scallion, garlic chives, java water dropwort, sweet potato stem, taro stem, Eastern brackenfern, asparagus, celery, bamboo shoot, kohlrabi, bud of Japanese angelica tree, wild rocambol, Asian royal fern, green garlic (including garlic stem), *rakkyo (*Chinese onion), salt sandspurry, leek, allium hookeri,

		etc.
	Root and tuber vegetables	radish (root), onion, garlic, carrot, ginger, lotus root, burdock, bellflower root, bonnet bellflower, beet, sugar beet, turnip, parsnip, yacon, Korean wasabi (root), chicory (root), ginseng (including wood-cultivated ginseng), Korean solomon's Seal (root), etc.
	Fruiting vegetables, Cucurbits	cucumber, squash, Korean melon, watermelon, melon, autumn squash, etc.
	Fruiting vegetables other than Cucurbits	tomato, cherry tomato, chili pepper, bell pepper (including paprika), eggplant, okra, unripe bean, etc.
Mushrooms	-	oyster mushroom, pine mushroom, oak mushroom, cultivated mushroom, cauliflower coral, winter mushroom, tree ear, Lingzhi mushroom, king oyster mushroom, black hoof fungus (*sang-hwang* mushroom), parasol mushroom, nameko (*Pholiota nameko*), Craterellus luteocomus., agaricus, manna lichen mushroom, etc.
Spices	-	mustard, *cinnamomi ramulus*, cinnamon bark (*cinnamomi cortex*), coriander fruit, Korean wasabi, rosemary, myrrha, basil, mint, thyme, saffron, Chinese pepper, peppermint, bay leaves, nutmeg, cloves, perilla, fennel, pepper, cumin, caper, turmeric, turmeric, cardamom, etc.
Teas	-	tea
Hops	-	hop
Algars	-	seaweed papulosa, sea lattuce, *gompi*, laver, sea string, kelp, *Giartina tenella*, stone laver, *Silvetia siliquosa*, seaweed fulvescens, Gulf weed, sea mustard, fukurofunori, egonori, spirulina, ceylon moss, carragheen, sea staghom, chlorella, seaweed fusiforme, sea lettuce, etc.
Other plants		sugar cane, sweet sorghum, sicklepod, maté,

		jasmine, fiveleaf gynostemma herb, matari, tetrandra root, Asian plantain, tiger lily, etc.

2) Ingredients of Animal Origin

Main category	Category	Subcategory	Commodity
Livestock products	-	Meat	beef, pork lamb, goat meat, rabbit meat, horse meat, venison, chicken, pheasant meat, duck meat, goose meat, turkey meat. quail meat, etc.
	-	Milk	cow's milk, goat milk, etc.
	-	Eggs	egg, duck eggs, quail egg, etc.
Fishery products	Fishes	Freshwater fishes	snakehead, amur catfish, Chinese muddy loach, crusian carp, crucian carp, pondsmelt, golden mandarin fish, carp, stone moroko, Arctic lamprey, common carp, etc.
		Pelagic fishes	cherry salmon, salmon, ayu sweetfish, common eel, etc.
		Marine fishes	1) ray, flounder, Pacific cutlass fish, collichthys niveatus, chub mackerel, Pacific saury, Japanese flyingfish, bastard halibut (halibut), spottybelly greenling, seabass, tuna, Pacific cod, sandfish, sea bream, genuine goby, anchovy, Alaska pollack, croaker, tongue sole, amberjack, Japanese sardinella, glass fish, silver pomfret, puffer, silverbelly sea perch, black rockfish (rockfish), dark-banded rockfish, conger, Japanese Spanish mackerel, black cow-tongue, mullet, grub fish, Korean sandlance, sablefish, okhotsk atka mackerel, horse mackerel, dotted gizzard shad, sardine, croaker, slender shad, threadsail filefish, Pacific herring, skate ray, etc. 2) Deep-sea fish: marbled rockfish (including longjaw rockfish but excluding coastal fishes), alfonsino, broadnose sevengill shark, pelagic tresher, salmon shark, mako shark, piked

			dogfish, hammerhead, silver chimaera, blue shark, blacktip reef shark, sawedged perch, pink cusk-eel, black oreo (*Allocyttus niger*), smooth oreo dory (*Pseudocyttus maculatus*), orange roughy (*Hoplostethus atlanticus*), Opah, Inshore hagfish (excluding coastal fishes), silver warehou, patagonian toothfish, Southern hake (limited to New Zealand Group only), etc. 3) Tunas and billfishes: bluefin tuna, Southern bluefin tuna, albacore, bigeye tuna, yellowfin tuna, Indo pacific sailfish, striped marlin, Indo pacific blue marlin, Indian spearfish, swordfish, longtail tuna, skipjack tuna, black skipjack, bullet tuna, frigate tuna, etc.
	-	Fish eggs	pollack roe, salmon roe, caviar, etc.
	Invertebrates	crustaceans	shrimp, crab, lobster, crayfish, three-spined shore crab, krill, etc.
		Mollusks	1) Shellfishes: oyster, mussel, blood cockle, marsh clam, spiny topshell, whelk, clam, abalone, Filipino venus, etc. 2) Cephalopods: octopus, squid, long arm octopus, cuttlefish, beka squid, webfoot octopus, etc. 3) other mollusks: gaebul (*Urechis unicinctus*), sea hare, jellyfish, etc.
		Echinoderms (sea urchins)	sea urchin, sea cucumber, etc.
		tunicates	sea squirt, warty sea squirt, wrinkled sea squirt, etc.
Other animals	-	Reptiles and amphibians	edible soft-shelled turtle, edible frog, etc.
	-	-	edible snail, etc.

Chapter 2

Common Standards and Specifications for General Foods

2. Common Standards and Specifications for General Foods

1. Food Ingredient Standards

1) Requirements for Ingredients, etc.

(1) Ingredients used for manufacturing of foods shall be collected, handled, processed, manufactured or managed for the pupose of human consumption.

(2) Ingredients shall be of good quality and fresh; such ingredients shall not be spoiled or deteriorated, nor shall they be contaminated by toxic or harmful substances, thereby being safe.

(3) In the event that natural ingredients that are not subject to food manufacturing/processing business registration, are directly processed and used for processed foods, foreign matters on such ingredients, such as soil, sand, dirt, etc., shall be sufficiently removed and washed off with food processing water as necessary. In addition, inedible part shall be sufficiently removed.

(4) When purchased and used by businesses subject to license, registration or report, such food ingredients shall be registered for manufacturing business registration or complete import declaration, and conform to the applicable Standards and Specifications; those in violation of related laws, such as expired products, etc., shall not be used.

(5) Foods and food additives shall conform to the applicable Standards and Specification, if any; ginseng, red ginseng and black ginseng to the “Ginseng Industry Act;” wood-cultivated ginseng to the “Forestry and Mountain Villages Development Promotion Act;” and livestock products to the “Livestock Products Sanitary Control Act.” However, in the event that the standards and specifications for hazardous contaminants, such as heavy metals, in finished products are stricter than for those in ingredients for use, ingredients shall be used properly in conformity with the former.

(6) In the event of using ground powder as ingredients, they shall be fresh, and not spoiled or deteriorated; nor shall they be contaminated by foreign matters.

(7) Food processing water shall meet the drinking water standards under the “Management of Drinking Water Act;” or shall be fresh water, concentrated

water, deionized mineral water or mineral concentrated water that meets the Standards/Specifications under the “Development and Management of Deep Sea Water Act.”

(8) In the event of using agricultural/livestock/fishery ingredients, etc. that are grown and cultivated through genetic modification technology, such as by taking useful genes only from an organism and combining them with those from other organisms, etc., such ingredients shall be determined to be conforming as a result of the safety review under the “Regulation on GMO Food Safety Review” pursuant to Article 18 of the “Food Sanitation Act.”

(9) Lactic acid bacteria, etc. used in food shall be edible for human consumption and safe in terms of food sanitation.

(10) Chinese sumac (*Rhus verniciflua* Stokes) may be used only as an ingredient of the product for cooking sumac chickens or ducks in the form of sumac extract water or a sumac extract tea bag. In such case, urushiol components shall not be detected in products that used Chinese sumac. In addition, sumac extract water with urushiol components removed by using *Fomitella fraxinea* (Fr.) Imaz., may be used exclusively in soy sauces and pastes, fermented vinegars, Korean turbid rice wines (*takju*), Korean cleared rice wines (*yakju*), Korean refined rice wines (*cheongju*) and fruit wines only prior to fermentation process. In the above cases, the use amount is as follows:

(a) Soy sauces and pastes and fermented vinegars: Not more than 10.0% of the finished product weight based on the Chinese sumac weight used in manufacturing extract

(b) Turbid rice wines (*takju*), cleared rice wines (*yakju*), refined rice wines (*cheongju*) and fruit wines: Not more than 2.0% of the finished product weight based on the Chinese sumac weight used in manufacturing extract

(11) Ginseng or red ginseng-containing products

① In the case of using ginseng as ingredients, dried young ginseng (*chunmisam*), ginseng seedling (*myosam*), skin (*sampi*) and ginseng marc shall not be used; and diseased ginseng may be used after removal of the damaged parts.

② Ginseng leaves shall not contain foreign matters such as other plants; nor shall they be diseased ginseng leaves or stems or flowers.

③ Fresh ginseng roots to be added in their original form shall not be less than 3 years old; (except hydroponic ginseng set forth in the Ginseng Industry Act); and diseased ginseng or lower grade ginseng may not be used.

(12) Eggs used as an ingredient in manufacturing and processing foods shall not be unfit for human consumption, such as spoiled eggs, eggs with rancid odor or mold, or mixed with foreign matters, containing blood, or with leaking contents or ruptured yolks (excluding those due to physical causes), or those that stopped hatching or failed to hatch, etc.; and they shall conform to the maximum residue limits for eggs.

(13) Raw milk shall not contain any drugs for neutralization, pasteurization, suppression of bacterial proliferation and storage. In addition, cow's milk and goat's milk may not be received at the same plant, nor shall they be mixed together.

(14) Ingredients for frozen edible fish heads shall be those classified as fit for human consumption (HS 0303) under the International Convention on the Harmonized Commodity Description and Coding System of the World Customs Organization (WCO); processed in a sanitary manner; and approved as such by related authorities. In addition, such ingredients shall be obtained by removing viscera and gills upon cutting of the ingredients, and processed in a sanitary manner without use of other materials, such as food additives.

(15) Ingredients for frozen edible fish viscera shall be those classified as fit for human consumption (HS 0303, 0306, or 0307) under the International Convention on the Harmonized Commodity Description and Coding System of the World Customs Organization (WCO); processed in a sanitary manner; and approved as such by related authorities. In addition, such ingredients shall be obtained by removing other viscera upon separation of the ingredients without use of other materials, such as food additives.

(16) Uncooked raw oysters shall be produced in the seas that meet the Water Quality Standards for Clean Waters pursuant to the "Standards for Rating the Production Areas of Sedentary Marine Animals and Plants" (notified by

Ministry of Oceans and Fisheries); or treated to meet the Standards For Clean Waters through natural*or artificial purification**

* Natural purification: A process to transfer oysters to the area that meets the water standards and treated using natural purification capacity in order to reduce the microorganism level in oysters

** Artificial purification: A process to treat oysters with limited water environments, such as land-based facilities, etc., in order to reduce pathogens in oysters

(17) Ice for fishery used for storage and preservation of fishery products, etc., shall be handled in a sanitary manner.

(18) Ingredients used in propolis extract-containing food shall be those collected by honeybees without being contaminated.

(19) Chlorella in chlorella-containing food and spirulina in spirulina-containing food shall be purely cultured.

(20) Ingredients used in keto acid-containing food shall be obtained using crustaceans (such as crabs and shrimps, etc.) where uncontaminated keto acid can be extracted. No manufacturing solvent residue shall remain in the food after being used for manufacturing such food using keto acid.

(21) “Edible insects” shall meet the Standards and Specifications, etc. for Breeding of Edible Insects set forth in the “Act on Fosterage and Support of The Insect Industry.”

(22) Chili peppers that are diseased, moldy, rotten, or speckled due to being dried in spoiled condition shall not be used.

(23) In the event that edible by-products generated in manufacturing/processing food are intended to be used as an ingredient for other products, such by-products shall be collected, handled and managed in a sanitary manner according to the food handling standards.

2) Standards for Determining Food Ingredients

(1) Any of the following shall not be used as a food ingredient in

manufacturing/processing or preparing food; provided, however, that those approved by the Minister of Food and Drug Safety and those approved in accordance with the “Standards for Approval of Temporary Standards and Specifications for Foods, etc.” may be used as food ingredients.

① Those not collected, handled, processed, manufactured or managed for the purpose of human consumption

② Those for which safety and soundness have not been proven as a food ingredient

③ All others deemed unfit for human consumption by the Minister of Food and Drug Safety

(2) For those not set forth in the above (1), the Minister of Food and Drug Safety shall determine whether they can be used as a food ingredient. However, upon discovering or being presented with a new fact related to the safety of the food ingredients, the Minister may re-examine and determine whether they can be used as a food ingredient.

(3) Ingredients without toxicity or adverse effects and with history of safe use in food in Korea, other than those consumed for appetite suppression or medical effects, may be deemed usable as “Ingredients approved for use in food” or “Ingredients approved for limited use in food.”

(4) The following ingredients may be determined as “Ingredients approved for limited use in food,” and their intended use may be limited to a certain food.

① Those with history of limited use in certain foods only, such as spices, leached teas and alcoholic beverages, etc.

② Those to be used only after completely removing materials that are toxic or cause adverse effects

③ Those requiring residue limit of toxic or adverse effect-causing substances

(5) Documents to submit for approval of food ingredients

Those who submit documents for approval may refer to the following “Decision Tree for Using Food Ingredients.” The submission documents shall include:

① Documents for basic characteristics of the ingredients

(a) Names or synonyms of the ingredients

(b) Scientific name and part for use of the ingredients

(c) Documents for characteristics of the ingredients, such as components and contents, photos and habitat, etc.

(d) Intended use in food

② Evidence for history of safe use in food

(a) Documents supporting that the ingredients have been traditionally consumed as food in Korea

③ Documents to submit for toxic substances or side effects

(a) Documents for the names, molecular structures and characteristics, etc. of the toxic or adverse effect-causing substances

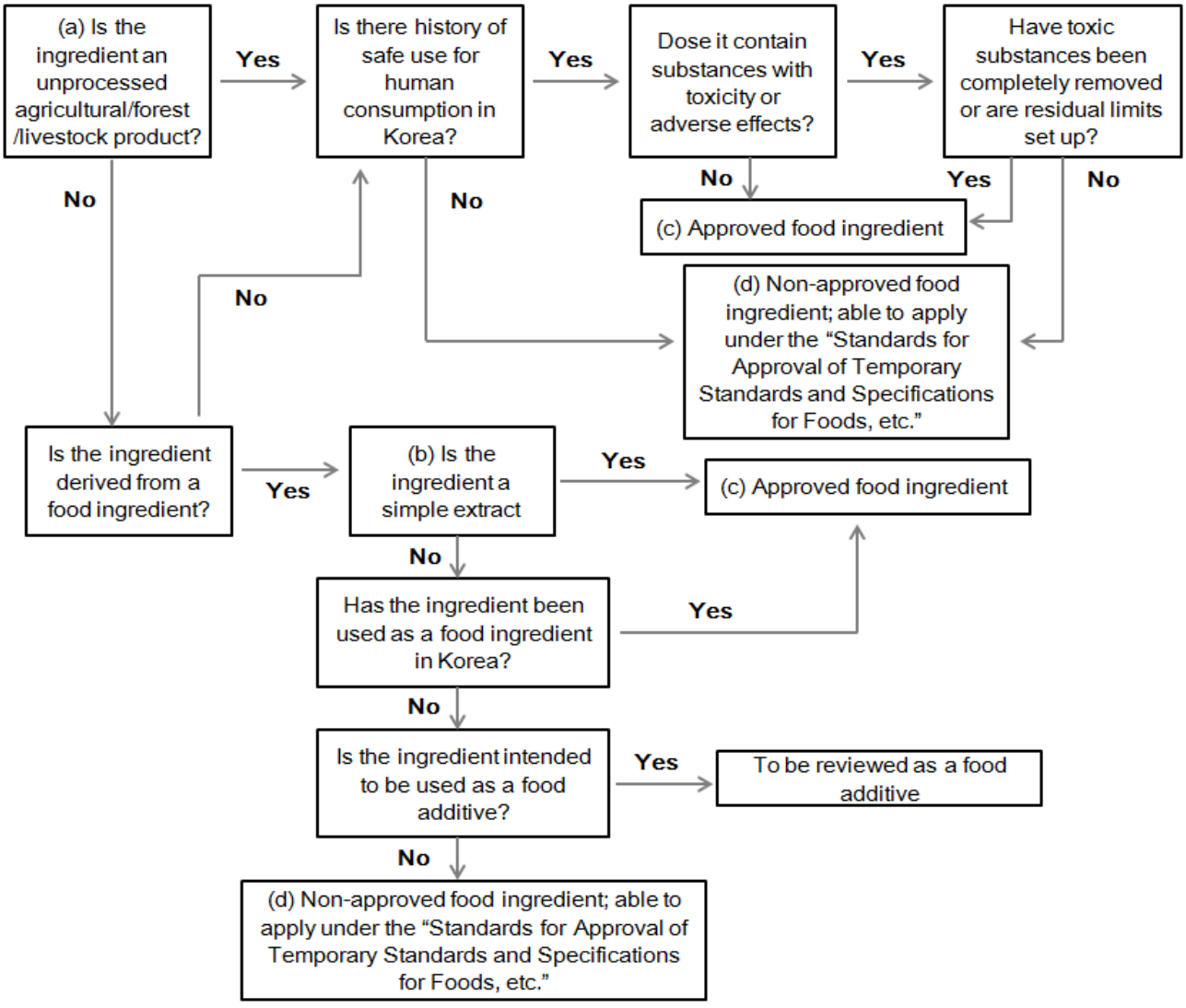
(b) Documents for toxic reaction or adverse effects of the causing substances

(c) Documents on methods of analysis for toxic substances, etc.

(d) Evidences demonstrating complete removal of toxic or adverse effect-causing substances, if applicable

(e) In cases where residue limits are set up for toxic or adverse effect-causing substances, documents relevant to regulations; reasons for setting up; and contents in the finished products

< Decision Tree for Using Food Ingredients >



○ Approved food ingredient: Permitted for use as an "Ingredient approved for use in food" or an "Ingredient approved for limited use in food."

○ Non-approved food ingredient: Not permitted for use as a food ingredient; but application may be available under the "Standards for Approval of Temporary Standards and Specifications for Foods, etc." (Relavent to Article 5 of the Enforcement Rule of the Food Sanitation Act)

(6) Ingredients approved for use in food

① The list of the "Ingredients Approved for Use in Food" shall be as specified in "Annex 1."

② The ingredients listed in the “Chapter 1. General Provisions 4. Classification of Food Ingredients”

(7) Ingredients approved for limited use in food

① The list of the “Ingredients Approved for Limited Use in Food” shall be as specified in“Annex 2.”

② Those that are classified as “Ingredients Approved for Limited Use in Food” shall comply with the specified use conditions; those without separate use conditions shall be subject to the following use standards:

(a) The use of the animals/plants, etc., specified as “Ingredients Approved for Limited Use in Food” shall be limited to less than 50% of the total ingredients (excluding mixing water) when mixed proportionally, based on the pre-processing weight of the ingredient.

(b) When blended, the total ingredients included in the list of “Ingredients Approved for Limited Use in Food” shall be limited to less than 50% of the product (excluding mixing water), based on the pre-processing weight of such ingredients.

(c) However, if teas, beverages, alcoholic beverages and spice products contain one ingredient of plant origin included in the list of “Ingredients Approved for Limited Use in Food” when manufactured, such ingredient may be used as “Ingredients Approved for Use in Food.”

(8) Requirement for listing the temporarily approved food ingredients in Korean Food Code

① The food ingredients approved pursuant to the “Standards for Approval of Temporary Standards and Specifications” may be additionally listed in “Annex 1. Ingredients Approved for Use in Food” or “Annex 2. Ingredients Approved for Limited Use in Food” upon meeting one of the following requirements:

(a) 3 years has passed since the date of approval of temporary Standards and Specifications;

(b) 3 or more persons have been approved for temporary Standards and Specifications; or

(c) Those who have received approval for temporary Standards and

Specifications request listing (provided, however, that if two persons have been approved, request shall be made by both parties.)

2. Manufacturing/Processing Standards

1) The ingredients, machines/instruments and subsidiary facilities used in manufacturing/processing foods shall be maintained and managed in a sanitary manner at all times.

2) Food processing water shall meet the Drinking Water Standards under the "Management of Drinking Water Act;" or shall be fresh water, concentrated water, deionized mineral water or mineral concentrated water that meets the Standards/Specifications under the "Development and Management of Deep Sea Water Act."

3) Food processing water may be treated before use, using water treatment chemicals specified in the "Drinking Water Management Act;" or using methods, such as coagulation process, filtration (activated carbon; sand; ceramic; barley stone; diatomite; microfilter; ultra filter; reverse osmosis membrane; and ion exchange resin), ozone pasteurization, UV pasteurization, electrolysis and chlorine disinfection, etc., according to the intended use of each product.

4) Foods with specific mixing ratio standards set forth in "Chapter 4. Standards and Specifications for Each Food Product" shall follow such standards; in the case of dehydrated or concentrated food to be reconstituted by adding water, the components and content ratio (%) shall be applied after being converted to those in the reconstituted condition; provided however, that mixing water to be added may be excluded depending on the characteristics of each product upon mixing of the ingredients, in the case of processed meat products and processed egg products.

5) In the case of an ingredient with 100% mixing ratio, the content of food additives shall be excluded; provided, however, that the applicable food containing food additives shall conform to the specifications for such product set forth in "Chapter 4. Standards and Specifications for Each Food Product."

6) In the course of manufacturing/processing and preparing foods, such foods shall be protected from adulteration and contamination by foreign matters or pathogenic microorganisms, etc.; and during a manufacturing process, those temporary stored before proceeding to another manufacturing process shall be handled and stored in a sanitary manner.

7) Food may be extracted using only water, ethyl alcohol or the mixture of water and ethyl alcohol and carbon dioxide; provided, however, that where separate standards set forth in the Standard and Specifications for Food Additives, such respective use standard shall apply.

8) Frozen ingredients shall be thawed in a separate, clean defrosting area in a sanitary manner.

9) Veterinary drugs may not be used during food manufacturing, processing, preparing, preserving and distribution, etc.

10) Processed foods shall be packaged in a sanitary manner in order to prevent contamination by microorganisms, etc.

11) Foods shall not be manufactured in capsules or tablets. However, confectionery, candies, chewing gum, chocolates, edible salt, soy sauces and pastes, composite seasoning and processed saccharide products may be manufactured in tablets, and edible fats and oils in capsules; but in such cases, in a way that there is no concern of being misunderstood or confused with drugs.

12) During food treatment/processing, the processes, such as drying, concentration, heat treatment, cooling or freezing, etc., shall be implemented in a proper manner by considering safety and nutrition of the products.

13) Raw milk shall go through purification process for removal of foreign matters, and, if necessary, homogenization process for breaking up milk fat globules.

14) Unless otherwise specified, milk products shall be pasteurized or sterilized using the methods such as low temperature long time pasteurization (for 30 minutes at 63~65℃), high temperature short time pasteurization (for 15 to 20 seconds at 72~75℃), ultra high temperature sterilization (for 0.5 seconds to 5 seconds at 130~150℃), or other methods with equal or better effect. In addition, pasteurized products shall be cooled down to 10℃ or below immediately after pasteurization; whereas sterilized products shall be filled and packaged in a sterilized container or package, using aseptic filling process.

15) Pasteurized food products shall be heat-pasteurized for 30 minutes keeping their center temperature at 63℃ or above, or using alternative methods with equal or better effect; and packaged or handled in a sanitary manner to prevent contamination. In addition, sterilized food products shall be placed in an

airtight container/package, and sterilized for 4 minutes or longer, keeping their center temperature at 120℃ or above, or using alternative sterilization with equal or better effect. However, the food products specified in the “Standards and Specifications for Each Food Product” shall conform to the corresponding standards.

16) Unpasteurized products shall be managed in a manner conforming to the following standards or using a method with equal or better effect.

(1) Pork used as raw meat shall be cooled down to and maintained at 5℃ or below within 24 hours after slaughtered.

(2) For trimming of raw meat or thawing of a frozen raw meat ingredient, the temperature at the center of the meat shall not exceed 10℃.

17) The room temperature in the processing plants for processed meat products and packaged meat shall be maintained and managed at 15℃ or below. (except for heat treatment plants)

18) Except in special cases during the process of processed meat product and packaged meat processing, such ingredients shall be processed as quickly as possible.

19) Fish parts other than flesh shall be stored, keeping the center temperature at -18℃ or below after sufficiently removing inedible part.

20) Raw oysters shall be cleaned sufficiently with hygienic water promptly after harvested; and no food additives shall be used (except sodium hypochlorite).

21) Food apparatus and containers/packages shall conform to the “Standards and Specifications for Food Apparatus, Containers and Packages” pursuant to Article 9 of the “Food Sanitation Act.”

22) Any material used for the purpose of maintaining freshness of the product by removing moisture, odor and oxygen inside the food package shall be packaged in a way that prevents it from transferring to the food, using materials conforming to the Standards and Specifications for Food Apparatus, Containers and Packages.

23) Food containers/packages shall be manufactured only by registered vendors for container/package manufacturing, except those who manufacture containers/packages in order to package their own products.

3. Standards and Specifications for General Foods

1) Properties and Conditions

A product shall have its own unique shape, color and gloss without unusual taste or odor.

2) Foreign Matters

(1) Food shall not contain: ① an unusual degree of foreign matters that cannot be removed any more ② contaminated and unsanitary foreign matters; and ③ hard or sharp foreign matters that may harm the human body. However, residues that have not been completely removed in the course of normal manufacturing/processing in practice, such as skin of plant ingredients or other plants; earthy materials; or hairs and bones of meat ingredients, etc., shall be excluded to the extent that their amount is small and the risk is low.

(2) As metallic foreign matters, the amount of detected iron powder shall be less than 10.0 mg/kg in the food when tested according to “Chapter 7. 1.2.1 E. Metallic Foreign Matters (iron powder).” Also, metallic foreign matters of 2 mm or longer shall not be detected.

3) Food Additives

(1) The use of food additives in foods shall be subject to the Standards and Specifications for Food Additives.

(2) In the case of using food additives that may not be used in certain foods but that are derived from the ingredients where such food additives may be permitted, such food additives may be exempted from the limitation of the standards for food additives to the extent carried over from the ingredient.

4) Hygiene Indicator Bacteria and Foodborne Pathogens

(1) Hygiene Indicator Bacteria

A. Food in general

Specifications / Items	Product Properties		n	c	m	M
Bacterial count	Processed foods intended for infants under 6 months	Liquid product	5	1	10	100
		Non-liquid product	5	2	1,000	10,000
Coliforms	Processed foods intended for infants under 6 months		5	0	0	-

B. Microbiological standards for beverages from vending machines (excluding sealed products)

A) Bacterial count: n=5, c=2, m=1,000, M=10,000 (excluding those containing milk products, lactic acid bacteria, fermented products and non-heated fruit/vegetable beverages).

B) *Escherichia coli*: n=5, c=2, m=0, M=10

C. Fishery products

A) Bacterial count: Animal-derived frozen fishery products that are sanitized and packaged in a container/package for distribution and sale intended for direct consumption by final consumers: n=5, c=2, m=100,000, M=500,000

B) *Escherichia coli*

① Animal-derived frozen fishery products that are sanitized and packaged in a container/package for distribution and sale intended for direct consumption by final consumers : n=5, c=2, m=0, M=10

② Frozen edible fish heads or frozen edible fish viscera: n=5, c=2, m=0, M=10

③ Raw oysters: n=5, c=1, m=230, M=700 MPN/100g

(2) Foodborne Pathogens

A. In the case of meat (excluding ingredients for manufacturing and processing) and processed foods that have been pasteurized or sterilized, or that are intended for direct consumption without further processing or heating, depending on characteristics, foodborne pathogens, such as *Salmonella* spp., *Vibrio parahaemolyticus*, *Listeria monocytogenes*, Enterohemorrhagic *Escherichia coli*, *Campylobacter jejuni/coli*, *Yersinia enterocolitica*, etc., shall be limited to n=5, c=0, m=0/25g. In addition, for meat and meat products, *Tubercule bacillus*, *Bacillus anthracis* and *Brucella* spp. shall be negative.

However, the foods for which the specifications for foodborne pathogens are specified in “Chapter 4. Standards and Specifications for Each Food Product” shall be subject to the specifications for such foods. For other processed foods, *Bacillus cereus*, *Clostridium perfringens*, and S*taphylococcus aureus* shall have specifications as follows:

A) *Bacillus cereus*

① Soy sauces and pastes (except *meju* (fermented soybean lump)), sauce,

composite seasoning, *kimchi* products, salted and fermented seafood products, pickled food products, boiled foods: Not more than 10,000 per gram (sterilized products shall be negative).

② Meat (except ingredients for manufacturing and processing) and processed foods that have been pasteurized or that are intended for direct consumption without further processing or heating, other than those specified in ①: Not more than 1,000 per gram (sterilized products shall be negative).

B) *Clostridium perfringens*

① Soy sauces and pastes (except *meju* (fermented soybean lump)), hot pepper powder or shredded hot pepper, *kimchi* products, salted and fermented seafood products, pickled food products, boiled foods, composite seasoning, spice products, vinegars, curry powder and curry (except liquid products): Not more than 100 per gram (sterilized products shall be negative).

② Hams, sausages, meat extract products: n=5, c=1, m=10, M=100

③ Raw hams, fermented sausages, natural cheese, processed cheese: n=5, c=2, m=10, M=100

④ Meat (excluding ingredients for manufacturing and processing) and processed foods that have been pasteurized or sterilized, or that are intended for direct consumption without further processing or heating, other than those specified in ①, ②, ③: n=5, c=0, m=0/25g

C) *Staphylococcus aureus*

① Hams, sausages, meat extract products: n=5, c=1, m=10, M=100

② Raw hams, fermented sausages, natural cheese, processed cheese: n=5, c=2, m=10, M=100

③ Meat (excluding ingredients for manufacturing and processing) and processed foods that have been pasteurized or sterilized, or that are intended for direct consumption without further processing or heating, other than those specified in ①, ②: n=5, c=0, m=0/25g

B. In fishery products that are sanitized and packaged in a container/package for distribution and sale intended for direct consumption by end-consumers, *Salmonella* spp. and *Listeria monocytogenes* shall be limited to n=5, c=0, m=0/25g; and *Vibrio parahaemolyticus* and *Staphylococcus aureus* shall not be more than 100 per gram.

C. In any shell eggs that are intended for direct consumption without further processing or heating, no *Salmonella* Enteritidis shall be detected.

D. In meat (only applicable to ground meat) and packaged meat that are refrigerated or frozen in a package after being cut (including mincing or grinding) for sale, without adding additives, such as chemical synthetics, etc., or other foods (100% meat content; but only applicable to ground meat), Enterohemorrhagic *Escherichia coli* shall be limited to n=5, c=0, m=0/25g.

E. Foods manufactured/sold for consumption by infants under 6 months

A) *Cronobacter* spp.: n=5, c=0, m=0

F. Norovirus standards for food service business, etc.

Water used in washing food ingredients and dishes, etc; preparing and manufacturing/processing foods; and for drinking at food service business, meal service facilities, food manufacturing/processing facilities, etc.: Non-detected (provided, however, that drinking water provided at food service business and meal service facilities, etc., shall be subject to the Drinking Water Quality Standards set forth in the Management of Drinking Water Act)

5) Contaminants

(1) Heavy Metal Limits

① Agricultural products

Commodity		**Lead (mg/kg)**	**Cadmium (mg/kg)**	**Inorganic arsenic (mg/kg)**
Grains (excluding husked rice)		Not more than 0.2	Not more than 0.1 (not more than 0.2 for wheat and rice)	Not more than 0.2 (only applicable to rice)*
Tuberous and corm vegetables		Not more than 0.1	Not more than 0.1	
Legume vegetables and pulses		Not more than 0.2	Not more than 0.1 (not more than 0.2 for soybeans)	
Nuts and Seeds	Peanut or nuts	Not more than 0.1	0.3	
	Oilseeds	Not more than 0.3 (only applicable to sesame)	0.2 (only applicable to sesame)	
Fruits		Not more than 0.1 (not more than 0.2 for apples, mandarin orange and berries)	Not more than 0.05	
Leafy vegetables (including flowerhead		Not more than 0.3	Not more than 0.2	

brassicas)			
Leaf and stem vegetables	Not more than 0.1	Not more than 0.05	
Root and tuber vegetables	Not more than 0.1 (not more than 2.0 for ginseng, wood-cultivated ginseng, balloon-flower, bonnet bellflower)	Not moer than 0.1 (Not more than 0.05 for onions; not more than 0.2 for ginseng, wood-cultivated ginseng, balloon-flower, bonnet bellflower)	
Fruiting vegetables	Not more than 0.1 (not more than 0.2 for hot peppers or pumpkin)	Not more than 0.05 (not more than 0.1 for hot peppers or pumpkin)	
Mushrooms	Not more than 0.3 (only applicable to cultivated mushrooms, oyster mushrooms, king oyster mushrooms, oak mushrooms, pine mushrooms, winter mushrooms and tree ear)	Not more than 0.3 (only applicable to cultivated mushrooms, oyster mushrooms, king oyster mushrooms, oak mushrooms, pine mushrooms, winter mushrooms and tree ear)	
* A commodity shall be tested for inorganic arsenic to apply the limit only in the case the total arsenic detected therein exceeds 0.2 mg/kg			

② Livestock products

Commodity	Lead (mg/kg)	Cadmium (mg/kg)
Poultry meat*	Not more than 0.1	-
Porcine liver	Not more than 0.5	Not more than 0.5
Pork**	Not more than 0.1	Not more than 0.05
Porcine kidmey	Not more than 0.5	Not more than 1.0
Bovine liver	Not more than 0.5	Not more than 0.5
Beef**	Not more than 0.1	Not more than 0.05
Bovine kidney	Not more than 0.5	Not more than 1.0
Raw milk and other milks	Not more than 0.02	-

*Poultry meat: It refers to the muscle tissues of poultry carcasses including attached fat and skin from poultry, such as chickens, ducks, pheasants, geese, turkeys and quails, etc.

**Beef and pork: They refer to the muscle tissues of carcasses (or their cut pieces) including attached adipose tissues, such as fat in muscles and subcutaneous fat.

③ Fishery products

Commodity	Lead (mg/kg)	Cadmium (mg/kg)	Mercury (mg/kg)	Methylmercury (mg/kg)
Fishes	Not more than 0.5	Not more than 0.1 (applicable to freshwater and pelagic fishes) Not more than 0.2 (applicable to marine fishes)	Not more than 0.5 (dee-sea fishes, tunas and billfishes are excluded)	Not more than 1.0 (applicable to deep-sea fishes, tunas and billfishes)
Mollusks	Not more than 2.0 (however, not more than 2.0 for long arm octopus with viscera)	Not more than 2.0 (however, not more than 3.0 for long arm octopus with viscera)	Not more than 0.5	-
Crustaceans	Not more than 1.0 [however, not more than 2.0 for swimming crabs with viscera (crab species in Portunidae)]	Not more than 1.0 [however, not more than 5.0 for swimming crabs with viscera (crab species in Portunidae)]	-	-
Algae	-	Not more than 0.3 [applicable to laver (including seasoned laver; fresh weight basis)]	-	-
Frozen edible fish heads	Not more than 0.5	-	Not more than 0.5 (dee-sea fishes, tunas and billfishes are excluded)	Not more than 1.0 (applicable to deep-sea fishes, tunas and billfishes)
Frozen edible fish viscera	Not more than 0.5 (however, not more than 2.0 for cephalopods)	Not more than 3.0 (however, not more than 1.0 for fish roe; not more than 2.0 for cephalopods)	Not more than 0.5 (dee-sea fishes, tunas and billfishes are excluded)	Not more than 1.0 (applicable to deep-sea fishes, tunas and billfishes)

④ Processed Foods

Commodity	Lead (mg/kg)	Arsenic (mg/kg)
○ Edible fats & oils (excluding edible beef tallow and lard)	Not more than 0.1	Not more than 0.1
○ Infant formulas, follow-up formulas, cereal formulas for infants/young children, other foods for infants/young children, special formulas for infants/young children, infant milk formulas and follow-up milk formulas	Not more than 0.01 [In the case of powder products, the standard shall be applied by considering those intended for consumption after dilution (manufacturer's recommended intake method)]	-

⑤ Edible insects (on a dry weight basis)

① Mealworm (*Tenebrio molitor* L.) larvae : Not more than 0.1 mg/kg for lead;

not more than 0.05 mg/kg for cadmium;
not more than 0.1 mg/kg for arsenic

② Two-spotted cricket (*Gryllus bimaculatus*): Not more than 0.3 mg/kg for lead;
not more than 0.3 mg/kg for cadmium

③ *Allomyrina dichotoma* larvae: Not more than 0.3 mg/kg for lead;
not more than 0.3 mg/kg for cadmium

④ *Protaetia brevitarsis* larvae: Not more than 0.3 mg/kg for lead;
not more than 0.05 mg/kg for cadmium;
not more than 0.1 mg/kg for arsenic

⑥ In dried agricultural/forest/livestock/fishery products, etc., where water content changes due to drying process, the heavy metal limits shall be applied by considering such water content.

(2) Mycotoxin Limits

① Total aflatoxin (Sum of B_1, B_2, G_1 and G_2)

Commodity	**Limit (μg/kg)**
Grains, pulses, peanuts, nuts and simply treated products thereof (such as by grinding and cutting, etc.)	Not more than 15.0 (however, shall be not more than 10.0 for B_1)
Processed grain products and processed pulse products (general processed foods outside the scope of the Specifications)	
Soy sauces and pastes; hot pepper powder; and curry powder	
Nutmeg, turmeric, dried hot pepper, dried paprika and natural spices containing the foregoing	
Wheat flour	
Dried fruits	
Infant formulas, follow-up formulas, cereal formulas for infants/young children and other foods for infants/young children	- (B_1, not more than 0.10)

② Aflatoxin M_1

Commodity	Limit (μg/kg)
Raw milk and milks immediately before manufacture/processing	Not more than 0.50
Milk formulas (infant milk formulas, follow-up milk formulas); products containing milk components, among foods for special dietary use (infant formulas, follow-up formulas, cereal formulas for infants/young children, other foods for infants/young children and special formulas for infants/young children)	Not more than 0.025 [For powder products, the limit shall be applied by considering those intended for consumption after dilution (manufacturer's recommended intake method)]

③ Patulin

Commodity	Limit (μg/kg)
Apple juice Apple juice concentrate (including those used as ingredients; converted by the concentration factor)	Not more than 50
Infant formulas, follow-up formulas, other foods for infants/young children	Not more than 10.0

④ Fumonisin

Commodity	Limit (mg/kg, as the sum of B^1 and B^2)
Maize	Not more than 4
Simply treated maize (such as by grinding and cutting, etc.)	Not more than 2
Processed cereal products and cereals containing 50% or more simply treated maize; Processed maize products for popcorn	Not more than 1

⑤ Ochratoxin A

Commodity	Limit (μg/kg)
Grains and their simply treated products (such as by grinding and cutting, etc.)	Not more than 5.0
Coffee beans, roasted coffee	
Instant coffee	Not more than 10.0
Meju (fermented soybean lump)	Not more than 20
Hot pepper powder	Not more than 7.0
Grape juice, grape juice concentrate (including those used as ingredients; converted by the concentration factor), wine	Not more than 2.0
Dried fruits	Not more than 10.0
Infant formulas, follow-up formulas, cereal formulas for infants/young children and other foods for infants/young children	Not more than 0.50

⑥ Deoxynivalenol

Commodity	Limit (mg/kg)
Grains and their simply treated products (such as by grinding and cutting, etc.; except maize and simply treated maize)	Not more than 1
Maize and simply treated maize (such as by grinding and cutting, etc.)	Not more than 2
Cereals	Not more than 0.5
Infant formulas, follow-up formulas, cereal formulas for infants/young children and other foods for infants/young children	Not more than 0.2
Noodles	Not more than 0.75

⑦ Zearalenone

Commodity	Limit (μg/kg)
Grains and their simply treated products (such as by grinding and cutting, etc.)	Not more than 200
Confectionery	Not more than 50
Infant formulas, follow-up formulas, cereal formulas for infants/young children, other foods for infants/young children	Not more than 20
Cereals	Not more than 50

(3) Dioxin

① Beef: Not more than 4.0 pg TEQ/g fat

② Pork: Not more than 2.0 pg TEQ/g fat

③ Chicken: Not more than 3.0 pg TEQ/g fat

(4) Polychlorinated biphenyl (PCBs): Not more than 0.3 mg/kg (only applicable to fishes)

(5) Benzo(a)pyrene

① Edible fat and oil (excluding edible beef tallow and lard): Not more than 2.0 μg/kg

② *Sookjihawang* (processed rehmannia root) and dried adhesive rehmannia roots: Not more than 5.0 μg/kg

③ Smoked fish meat: Not more than 5.0 μg/kg (except dried products)

④ Smoked dried fish meat: Not more than 10.0 μg/kg [Applied on a fresh weight basis (In case the water content changes due to drying process, such water content shall be considered for application.). This standard may not

apply only when such product is used as an ingredient in water extract products; and benzo(a)pyrene shall not be detected in such water extracts]

⑤ Fishes: Not more than 2.0 μg/kg

⑥ Shellfishes: Not more than 10.0 μg/kg

⑦ Mollusks (except for shellfishes) and crustaceans: Not more than 5.0 μg/kg

⑧ Foods for special dietary use (Infant milk formulas, follow-up milk formulas, Infant formulas, follow-up formulas, cereal formulas for infants/young children, other foods for infants/young children and special formulas for infants/young children): Not more than 1.0 μg/kg

⑨ Smoked meat products and their processed products: Not more than 5.0 μg/kg

⑩ Black ginseng (including its powder): Not more than 2.0 μg/kg

⑪ Black ginseng concentrate: Not more than 4.0 μg/kg

(6) 3-MCPD (3-Monochloropropane-1,2-diol) Limit

Commodity	Limit
Acid hydrolyzed soy sauce, blended soy sauce (limited to those manufactured by mixing and processing acid hydrolyzed soy sauce or its undiluted solution)	Not more than 0.3 mg/kg
Hydrolyzed vegetable protein (HVP)	Not more than 1.0 mg/kg (based on a dry weight basis)

* Hydrolyzed vegetable protein (HVP): Those obtained by hydrolyzing vegetable proteins from beans, maize or wheat, etc. into amino acids, through chemical processing (except enzyme hydrolysis)

(7) Melamine Limit

Commodity	Limit
○ Infant milk formulas, follow-up milk formulas, Infant formulas, follow up formulas, cereal formulas for infants/young children, other foods for infants/young children and foods for special medical purposes etc., among foods for special dietary use.	Not detected
○ All foods and food additives other than the above	Not more than 2.5 mg/kg

(8) Shellfish Poison Limit

① Paralytic shellfish poisons

Commodity	Limit (mg/kg)
Shellfish	Not more than 0.8
Tunicates (Korean common sea squirt (*Halocynthia roretzi*), warty squirt (*Styela clava*), wrinkled sea squirt (*Styela plicata*), etc.)	

② Diarrhetic shellfish poisons (Sum of okadaic acid and dinophysistoxin-1)

Commodity	Limit (mg/kg)
Bivalves	Not more than 0.16

③ Application of provisional limits for shellfish poisons in dried fishery products

In case of water content change due to drying process, such water content shall be considered for application.

(9) Maximum Radioactivity Limit

Nuclides	Commodity	Limit (Bq/kg, L)
^{131}I	Infant formulas, follow-up formulas, cereal formulas for infants/young children, other foods for infants/young children, special formulas for infants/young children, Infant milk formula, follow-up milk formula, milk or milk products, ice creams	Not more than 100
	Other foods★	Not more than 300
^{134}Cs + ^{137}Cs	All Foods	Not more than 370

★ Other foods include all foods and agricultural/livestock/fishery products except infant formulas, follow-up formulas, cereal formulas for infants/young children, other foods for infants/young children, special formulas for infants/young children, milk and milk products.

6) Food Irradiation Standard

(1) Either gamma ray or electron beam may be used for food irradiation.

(2) ^{60}Co may be used as a source of gamma rays; and an electron beam accelerator, as a source of electron beams.

(3) In the event of using gamma ray energy emitted from ^{60}Co, such energy shall not exceed the absorbed dose for each food item permitted to be irradiated.

(4) In the event of using an electron beam accelerator for food irradiation, the energy of electron beams shall be limited to not more than 10 MeV and shall

not exceed the absorbed dose for each food commodity permitted to be irradiated.

(5) Food irradiation may be used only for approved ingredients and commodities that are handled/stored in a sanitary manner; and such technology shall not be used for purposes other than delay of sprouting, pasteurization, insect control or ripening control, etc.

(6) Food irradiation standards for each food shall be as follows:

① Absorbed dose for each permitted food

Commodity	**Purpose of irradiation**	**Dose (kGy)**
Potatoes Onions; Garlic	sprouting inhibition	sprouting inhibition
Chestnuts	Control of insects/ sprouting inhibition	Not more than 0.25
Mushrooms (including dried mushrooms)	Control of insects/control of ripening	Not more than 1
Egg powder	Pasteurization;	Not more than 5
Grains (including powder); pulses(including powder)	Pasteurization/control of insects;	Not more than 5
Starch	Pasteurization	Not more than 5
Dried meat products	Pasteurization	Not more than 7
Fish powder, shellfish powder, crustacean powder	Pasteurization	Not more than 7
Soybean paste powder, hot pepper paste powder, soy sauce powder	Pasteurization	Not more than 7
Dried vegetables (including powder)	Pasteurization	Not more than 7
Yeast food, enzyme food	Pasteurization	Not more than 7
Algae food	Pasteurization	Not more than 7
Aloe powder	Pasteurization	Not more than 7
Ginseng(including red ginseng) products	Pasteurization	Not more than 7
Seasoned dried fish/shellfish fillet	Pasteurization	Not more than 7
Dried spices and their preparations	Pasteurization	Not more than 10
Composite seasoning	Pasteurization	Not more than 10
Sauces	Pasteurization	Not more than 10
Leached teas	Pasteurization	Not more than 10
Powdered teas	Pasteurization	Not more than 10
Foods for special medical purposes, etc.	Pasteurization	Not more than 10

(7) Irradiated food shall not be re-irradiated; and those manufactured and processed using the irradiated food as ingredients shall not be re-irradiated.

7) Maximum Residual Limits (MRLs) for Pesticides

(1) Application of pesticide MRLs in agricultural products

① For any pesticide residues in agricultural products, the following standards shall apply in consecutive order unless otherwise specified in the "Standards and Specifications for Foods" (except those falling under "Nuts and Seeds" and "Tropical Fruits" in the category of "Fruits" specified in "Chapter 1. 4. 1) Ingredients of Plant Origin").

(a) CODEX standards for the current year's agricultural product, (which means an individual agricultural product itself, and excludes those set as a group)

(b) The lowest MRLs for the current year's agricultural products among applicable pesticide MRLs specified in "**Annex 3** Pesticide MRLs for Agricultural Products;" and for the agricultural products in the same main category (however, if available, sub-category shall apply first) set forth in "Chapter 1. 4. 1) Ingredients of Plant Origin."

② The MRLs for pesticide residues in "Nuts and Seeds" and "Tropical fruits" in the category of "Fruits" set forth in "Chapter 1. 4. 1) Ingredients of Plant Origin" shall be 0.01 mg/kg, unless otherwise specified in the "Standards and Specifications for Foods."

③ Other pesticides not falling under the above "①," shall be subject to the lowest MRLs among applicable pesticide MRLs set forth in "**Annex 3** Pesticide MRLs for Agricultural Products;" (provided however that where MRLs are specified for other agricultural products among the applicable pesticide MRLs, such MRLs for other agricultural products shall apply first.)

(2) Pesticide MRLs for agricultural products

① Pesticide MRLs for agricultural products shall be as shown in "**Annex 3**;" provided however that where individual MRLs and group MRLs are both available, individual MRLs shall apply first.

② Among active components contained in the pesticides used/registered under the "Pesticide Control Act," and those legally used overseas in accordance with the applicable country's law, the following components shall be exempted from the requirement to establish MRLs:

No.	Active Components

1	1-Methylcyclopropene
2	Machine oil
3	Decylalcohol
4	*Monacrosporium thaumasium* KBC3017
5	*Bacillus subtilis* DBB1501
6	*Bacillus subtilis* CJ-9
7	*Bacillus subtilis* M 27
8	*Bacillus subtilis* MBI600
9	*Bacillus subtilis* Y1336
10	*Bacillus subtilis* EW42-1
11	*Bacillus subtilis* JKK238
12	*Bacillus subtilis* GB0365
13	*Bacillus subtilis* KB401
14	*Bacillus subtilis* KBC1010
15	*Bacillus subtilis* QST713
16	*Bacillus amyloliquefaciens* KBC1121
17	*Bacillus pumilus* QST2808
18	Bordeaux mixture
19	*Beauveria bassiana* GHA
20	*Beauveria bassiana* TBI-1
21	*Bacillus thuringiensis* subsp. aizawai
22	*Bacillus thuringiensis* subsp. aizawai NT0423
23	*Bacillus thuringiensis* subsp. aizawai GB413
24	*Bacillus thuringiensis* subsp. kurstaki
25	*Bacillus thuringiensis* var. kurstaki
26	Calcium polysulfide, lime sulfur
27	*Streptomyces goshikiensis* WYE324
28	*Streptomyces colombiensis* WYE20
29	Spreader sticker
30	Polyethylene Methyl Siloxane
31	IBA, 4-indol-3-ylbutyric acid
32	IAA, Indol-3-ylacetic acid
33	Sodium salt of alkylsulfonated alkylate
34	Alkyl aryl polyethoxylate
35	*Ampelomyces quisqualis* AQ94013
36	Oxyethylene methyl siloxane
37	Gibberellin A3,GibberellinA4+7
38	Calcium carbonate
39	Copper sulfate basic
40	Copper sulfate tribasic
41	Copper oxychloride
42	Copper hydroxide
43	Trichoderma harzianum YC 459
44	*Paenibacillus polymyxa* AC-1
45	*Paecilomyces fumosoroseus* DBB-2032

46	Polynaphthyl methane sulfonic acid dialkyl dimethyl ammonium (PMSAADA)
47	Polyether modified polysiloxane
48	Polyoxyethylene methyl Polysiloxane
49	Polyoxyethylene alkylarylether
50	Polyoxyethylene fatty acid ester (PFAE)
51	Sulfur
52	polynaphtyl methane sulfonic + polyoxyethylene fatty acid ester
53	Sodium ligno sulfonate
54	*Simplicillium lamellicola* BCP
55	*Trichoderma atroviride* SKT-1
56	Paraffin, Paraffinic oil
57	Pelargonic acid
58	Ethyl formate

(3) Pesticide MRLs and application principles for soybean (mung bean) sprouts

① 6-BA (6-BA, 6-Benzyl aminopurine, Benzyladenine) residue shall not be more than 0.1 mg/kg.

② Carbendazim, Thiabendazole, Thiram, Captan, sulfur dioxide and other pesticides without MRLs established for soybeans (including mung beans) shall not be detected.

③ For those pesticides with MRLs established for soybeans (including mung beans), 1/10 of the MRL for soybeans (including mung beans) shall be applied by factoring in the MRL derived from the soybeans (including mung beans).

(4) Application of provisional pesticide MRLs in processed foods

For any pesticide residues in processed foods, the following standards shall apply in consecutive order unless otherwise specified in the “Food Standards and Specifications”

① CODEX standards shall be applied first.

② Residues may be permitted within the scope of the MRLs of the raw commodities; that is, the standards for ingredient agricultural products and livestock products shall apply according to the content of the ingredients. Also, in case of water content change due to drying process, etc., such water content shall be considered for application. (However, 7 times of the pesticide MRL in hot peppers shall apply to dried hot pepper (including hot pepper powder and shredded hot pepper); 6 times of the MRL in teas, to

green tea extracts; 4 times of the MRL in fresh ginseng, to dried ginseng and red ginseng; and 8 times of the MRL in fresh ginseng, to ginseng and red ginseng concentrates, respectively.)

(5) Applicable scope of MRLs in livestock products

① Mammalian meat: Muscle tissues of animal carcasses, (or their parts) including attached adipose tissues, such as fat in muscles and subcutaneous fat; it includes meat of cattle, swine, lambs, goats, rabbits, horses and dears, etc. (except marine animals' meat)

② Mammalian fat: Unprocessed fats from the adipose tissues of cattle, swine, lambs, goats, rabbits, horses and dears, etc., excluding milk fat.

③ Mammalian by-products: Edible tissues and organs except meat and fat from the slaughtered animals, such as the liver, lung, heart, stomach, pancreas, spleen, kidney, head, tail, feet, skin, blood, and bones (bones containing tendons and tissues) of cattle, swine, lambs, goats, rabbits, horses and dears, etc.

④ Poultry meat: Muscle tissues, including attached fat and skin, from poultry, such as meat of chickens, pheasants, ducks, geese, turkeys and quails, etc.

⑤ Poultry fat: Unprocessed fats from adipose tissues of poultry, such as chickens, pheasants, ducks, geese, turkeys and quails, etc.

⑥ Poultry by-products: Edible tissues and organs, except meat and fat, from slaughtered poultry, including parts such as the liver, heart, gizzard, skin and feet, etc., of chickens, pheasants, ducks, geese, turkeys and quails, etc., that are edible.

⑦ Milk: Raw milk obtained from mammals, such as cow milk, sheep's milk or goat's milk, etc.

⑧ Milk products: Milks, processed milks, goat's milk, fermented milk, butter milks, concentrated milks, milk cream, butters, cheeses, powdered milk, whey products, lactose and hydrolyzed milk protein products that are manufactured/processed using raw milk or milk products as main ingredients.

⑨ Eggs: Eggs from poultry, such as eggs, duck eggs and quail eggs, etc., in particular, those with shells removed.

(6) MRLs for livestock products

Pesticide MRLs for livestock products shall be as shown in **"Annex 4."**

8) Maximum Residual Limits (MRLs) for Veterinary Drugs

(1) Application of veterinary drug MRLs in foods

① Any veterinary drugs prohibited from manufacture or import (including metabolites) due to identified safety and effectiveness problems shall not be detected. Such prohibited substances are as follows; those not listed in the following may also be subject to this provision in accordance with the related laws and regulations.

No.	Substances that shall not be detected in Food*[1]
1	Nitrofuran {Furazolidone, Furaltadone, Nitrofurazone, Nitrofurantoine, Nitrovin, etc.} formulations and metabolites ◎ Definition of residue : 3-amino-2-oxazolidinone (AOZ), 3-amino-5-morpholinomethyl-2-oxazolidinone (AMOZ), semicarbazide (SEM)[*2], nitrofurazone[*3], 1-aminohydantoin (AHD), nitrovin
2	Chloramphenicol ◎ Definition of residue: Chloramphenicol
3	Malachite green and metabolites ◎ Definition of residue: Malachite green expressed as the sum of Malachite green and Leucomalachite green
4	Diethylstilbestrol (DES) ◎ Definition of residue: Diethylstilbestrol
5	Dimetridazole ◎ Definition of residue: Dimetridazole expressed as the sum of Dimetridazole and 2-hydroxymethyl-1-methyl- 5-nitroimidazole(HMMNI)
6	Clenbuterol ◎ Definition of residue: Clenbuterol
7	Vancomycin ◎ Definition of residue: Vancomycin
8	Chlorpromazine ◎ Definition of residue: Chlorpromazine
9	Thiouracil ◎ Definition of residue: Thiouracil expressed as the sum of 2-thiouracil, 6-methyl-2-thiouracil, 6-propyl- 2-thiouracil and 6-phenyl- 2-thiouracil
10	Colchicine ◎ Definition of residue: Colchicine
11	Pyrimethamine ◎ Definition of residue: Pyrimethamine

12	Medroxyprogesterone acetate, MPA ◎ Definition of residue: Medroxyprogesterone acetate
13	Carbadox ◎ Definition of residue: Quinoxaline-2-carboxylic acid (QCA)
14	Dapsone ◎ Definition of residue: Dapsone expressed as the sum of Dapsone, and monoacetyl dapson
15	Olaquindox ◎ Definition of residue: 3-methyl quinoxaline- 2-carboxylic acid (MQCA)
16	Ronidazole ◎ Definition of residue: Ronidazole expressed as the sum of Ronidazole and 2-hydroxymethyl-1-methyl-5-nitroimidazole(HMMNI)
17	Metronidazole ◎ Definition of residue: Metronidazole expressed as the sum of Metronidazole and 1-(2-hydroxyethyl)-2-hydroxymethyl-5-nitroimidazole(Metronidazole-OH)
18	Ipronidazole ◎ Definition of residue: Ipronidazole expressed as the sum of Ipronidazole and 1-methyl-2- (2'-hydroxyisopropyl) -5-nitroimidazole(Ipronidazole-OH)

*Note 1. Limited to livestock products and fishery products of animal origin as well as their processed foods.

*Note 2. Semicarbazide (SEM), the nitrofurazone metabolites shall apply only to the edible part of non-heated livestock products and fishery products of animal origin (including simple cuts and excluding crustaceans).

*Note 3. Only applicable to crustaceans

② With regard to by-products of food animals (edible parts, such as internal organs, bones, head, tail, feet, skin, blood, etc.) that are not specified in “Annex 5 Veterinary Drug MRLs in Food,” the imits for “muscle (meat)” of the corresponding animal shall apply to livestock product; and “fish” to fishery products.

③ For manufactured/processed foods using the ingredients for which the MRLs are set, such residues may be permitted within the MRLs of the raw commodities. In other words, the respective MRL shall apply to the foods according to the content of their ingredient; if water content changes due to a process, such as drying, etc., such water content shall be considered upon application.

④ For royal jelly and propolis, the MRLs for honey shall apply.

⑤ For any food animals for which the MRLs are not specified in this Notification, the following standards shall apply in consecutive order.

(a) CODEX standards

(b) Among MRLs for the similar food animals, the lowest MRLs for the applicable part; in other words, for ruminants, nonruminants, poultry, fishes and crustaceans for which MRLs are not established, the lowest MRLs for the applicable parts of other ruminants, nonruminants, poultry, fishes and crustaceans for which MRLs are established (provided, however, that for horses that are nonruminants, the existing MRLs for ruminants, if any, shall apply.)

(c) The MRLs for antimicrobials in livestock/fishery products (including milk and eggs) and honey (including royal jelly and propolis) shall be limited to 0.03 mg/kg.

(2) Veterinary Drug MRLs in Food shall be as shown in **"Annex5."**

(3) Exemption from the veterinary drug MRLs in food

Substances proven harmless to the human body and those exempted from submitting documents on residues under the "Regulation on Review for Safety/Effectiveness of Veterinary Drugs, etc. (notified by the "Animal and Plant Quarantine Agency (QIA)") may be exempted from the requirement to establish MRLs. However, MRLs may be set as the Minister of MFDS deems necessary.

9) Illegal Compounds

(1) Drug compounds such as erectile dysfunction drugs, anti-obesity drug, antidiabetics, etc. and their analogues shall not be detected. The corresponding compounds are as follows:

① Erectile dysfunction drugs and their analogues

No.	Compound name
1	Sildenafil
2	Tadalafil
3	Vardenafil
4	Udenafil
5	Mirodenafil
6	Avanafil
7	Homosildenafil

8	Hongdenafil
9	Hydroxy homosildenafil
10	Amino tadalafil
11	Pseudo-vardenafil
12	Hydroxy hongdenafil
13	Dimethylsildenafil
14	Xanthoanthrafil
15	Hydroxyvadenafil
16	Norneosildenafil
17	Demethylhongdenafil
18	Piperidinohongdenafil
19	Carbodenafil
20	Thiosildenafil
21	Dimethylthiosildenafil
22	Acetylvardenafil
23	Benzylsildenafil
24	Norneovardenafil
25	Oxohongdenafil
26	Thiohomosildenafil
27	Desulfovardenafil
28	Nitrodenafil
29	Cyclopentynafil
30	Octylnortadalafil
31	Chlorodenafil
32	Cinnamyldenafil
33	Thioquinapiperifil
34	Hydroxythiohomosildenafil
35	Chloropretadalafil
36	Hydroxychlorodenafil
37	Dichlorodenafil
38	Demethyltadalafil
39	Acetaminotadalafil
40	Methylhydroxyhomosildenafil
41	Propoxyphenylthiosildenafil
42	Propoxyphenylthiohydroxyhomosildenafil
43	Propoxyphenylthiosildenafil
44	Propoxyphenylthioaildenafil
45	Homotadalafil
46	Acetyl acid
47	Gendenafil
48	Imidazosagatriazinone
49	Cis-cyclopentyltadalafil
50	Trans-cyclopentyltadalafil

② Anti-obesity drugs and their analogues

No.	Compound name
1	Sibutramine
2	Orlistat
3	Desmethylsibutramine

4	Didesmethylsibutramine
5	Chlorosibutramine

③ Antidiabetics and their analogues

No.	Compound name
1	Glibenclamide
2	Gliclazide
3	Glimepiride
4	Glipizide

④ Other drug compounds

No.	Compound name
1	T3
2	T4
3	Ephedrine
4	Fluoxetine
5	Fenfluramine
6	N-nitrosofenfluramine

10) Tar Color Limit for Foods for Infants/Young Children under 6 Months of Age

(1) Tar color: Not detected

11) δ-9-Tetrahydrocannabinol Limit

(1) Hemp seeds: Not more than 5 mg/kg

(2) Hemp seed oil: Not more than 10 mg/kg

12) Urushiol Component Limit

(1) Products containing lacquer trees: Not detected

13) Grayanotoxin Ⅲ Limit

(1) Honey: Not detected

14) Specifications for Edible Meat

(1) Volatile basic nitrogen (mg%) : Not more than 20

15) Specifications for Raw Milk

	Cow milk (as is milked)	Sheep's milk (as is milked)
Bacteria count and somatic cell count	Pursuant to the Standards for Livestock Hygiene Ratings under Article 4(2) of the Livestock Products Sanitary Control Act	Not more than 500,000 per mL (Standard agar plate count method)
Specific gravity	1.028~1.034(15℃)	1.028~1.034(15℃)
Acidity	Holstein milk: Not more than 0.18% Milk from other breeds: Not more than 0.20%	Not more than 0.2%
Alcohol test	Acceptable	-
Sediment test	Not more than 2.0 mg	-
Organoleptic tests	Acceptable	-
Watering and Salting test	Pursuant to the Standards for Livestock Hygiene Ratings under Article 4(2) of the Livestock Products Sanitary Control Act	-

16) Specifications for Fishery Products

(1) Histamine**:** Frozen fishes, salted fishes, canned fishes, simply treated food, such as dried or cut fishes (fishmeat, fillet, dried anchovies, etc.): not more than 200 mg/kg (only applicable to mackerels, tunas, salmons, Pacific sauries, Pacific herrings, anchovies, Japanese Spanish mackerels, sardines, bullet tunas and frigate tuna)

(2) Tetrodotoxin limit

① Meat: Not more than 10 MU/g

② Skin: Not more than 10 MU/g

③ Types of edible swellfish

	Scientific name
1	*Fugu niphobles, Takifugu niphobles*
2	*Fugu poecilonotus, Takifugu poecilonotus*
3	*Fugu pardalis, Takifugu pardalis*
4	*Fugu vermicularis vermicularis, Takifugu vermicuLaris snyderi*
5	*Fugu vermicularis porphyreus, Takifugu porphyreus*
6	*Fugu ocellatus obscurus, Takifugu obscurus*
7	*Fugu chrysops, Takifugu chrysops*

	Scientific name
8	*Fugu rubripes, Takifugu rubripes*
9	*Fugu rubripes chinensis, Takifugu chinensis*
10	*Fugu xanthopterus, Takifugu xanthopterus*
11	*Lagocephalus inermis*
12	*Lagocephalus wheeleri*
13	*Lagocephalus gloveri*
14	*Sphoeroides pachygaster, Liosaccus pachygaster*
15	*Fugu flavidus, Takifugu flavidus*
16	*ChiLomycterus affinis*
17	*Diodon holocanthus*
18	*Diodon liturosus*
19	*Diodon hystrix*
20	*Ostracion cubicus*
21	*Fugu stictonotus, Takifugu stictonotus*

(3) Carbon monoxide limit

① Fishery products shall not be treated with carbon monoxide artificially.

② In determining whether the respective food is treated with carbon monoxide, “Chapter 7. 6. 6.14 6.14.5 C. 1) B)” shall apply to frozen tilapia, frozen tunas and (refrigerated or frozen) Japanese amberjacks that are filleted, sliced or cut up; and “Chapter 7. 6. 6.14 6.14.5 C. 2) B)” to vacuum-packed frozen tilapia and (refrigerated or frozen) Japanese amberjacks.

17) Capsules Used in Manufacturing/Processing Foods

① Disintegration test: Shall be acceptable

② pH: 3.0~7.5

③ Arsenic (mg/kg): Not more than 1.5

④ Heavy metals (mg/kg): Not more than 50

⑤ Preservatives: Methyl ρ-hydroxybenzoate, ethyl ρ-hydroxybenzoate: Not more than 1.0 (as parahydroxybenzoic acid)

4. Preservation and Distribution Standards

1) All foods shall be handled and sold in a sanitary manner, and premises for storage and sale of such foods shall not be located in unclean areas. In addition, protection against hot weather and insects shall be thoroughly controlled.

2) Foods (including raw materials and ingredients used for manufacturing food) shall be protected from direct sunlight, or rain/snow, etc.; and properly controlled to prevent contamination by harmful substances, impurities and foreign matters (including molds, etc.); and shall not be stored with chemicals, pesticides, poisonous or toxic materials, etc.

3) Precautions shall be taken to ensure that foods are not adulterated by foreign matters. Further, food products shall be stored separately from other foods and food additives that may affect the flavor and taste of such products or other goods that may contaminate or affect the quality thereof.

4) Products shall be stored and distributed at room temperature, away from direct sunlight; and foods with less than 7 days of preservability under normal temperature condition shall be stored and distributed in cold storage or refrigeration facilities if possible.

5) Products shall be stored and distributed at a temperature of 0~10℃ for refrigerated products and at -18℃ or below for frozen products.

6) Ready-to-eat/convenience foods shall be provided to consumers in the shortest time after manufactured. For transportation and distribution of such foods, temperature-controlled equipment shall be used to control refrigeration, heat storage, room temperature and constant temperature; at this time, maintaining a temperature at 0~10℃ for refrigeration and 60℃ or above for heat storage.

7) Processed fish meat products (except for those placed in a hermetically sealed container/package and pasteurized), pasteurized soybean milks (except for those with a pH of 4.6 or below), salted-fermented-and-seasoned seafoods and processed soybean curd (except for those placed in a hermetically sealed container/package and pasteurized) shall be stored at 10℃ or below; whereas fresh-cut products and smoked salmons shall be stored at 5℃ or below. In addition, soybean curd and *muk* (starch jellies) (except for those hermetically

sealed soy bean curd and *muk*) shall be refrigerated or preserved by storing it in water conforming to the Drinking Water Quality Standard and changing water as often as possible.

8) Milks, processed milks, goat milk, butter milk, concentrated milks and whey products that are pasteurized shall be kept refrigerated; whereas milks, cheeses, butters that are fermented shall be kept either refrigerated or frozen; except for those processed in a manner that prevents spoilage, such as by removing moisture or adding sugar, etc.

9) Meat, packaged meat and processed meat products that are refrigerated shall be kept and distributed at -2~10℃ (except, at -2~5℃ for poultry meat and packaged poultry meat). However, sterilized or dried meat products may be stored at room temperature.

10) Fishery products of animal origin used as an ingredient for products shall be kept refrigerated or frozen; perishable ingredients, such as olive pulp for extra virgin olive oil, etc., at -10℃ or below; raw eggs, at 0~15℃, away from direct sunlight; raw milk, refrigerated; and raw meat, refrigerated or frozen.

11) Edible eggs shall be stored/distributed in refrigerated or frozen state at temperatures between 0~15℃; and processed egg products, at 10℃ or below (except liquid egg products at 5℃ or below), if possible. However, such products may be left unrefrigerated or unfrozen when processed in a manner that prevents spoilage, such as drying, sugar-preserving and salting, etc.

12) Raw oysters shall be packaged in a container with a lid (a synthetic resin or aluminum box or water-resistant container) and stored/distributed at 10℃ or below.

13) Refrigerated products may not be distributed at room temperature (except for fruits and vegetables).

14) Frozen products may not be distributed as room temperature or as refrigerated products after being thawed; except where, manufacturers additionally indicate frozen packaged date; thawed date; and expiration date under the distribution condition from the thawed date (within the expiration date as frozen products) on the frozen breads, rice cakes, chocolates, salted and fermented seafood products, fruit/vegetable juice, cheeses, butters, or processed fishery products (limited to those hermetically sealed after being sterilized or pasteurized) and

then thawing them.

15) Room-temperature or refrigerated products may not be distributed as frozen products; unless room-temperature or refrigerated sauces, soy sauces and pastes, edible fats and oils and spice products are packaged with frozen foods as a set to complement such foods. In this case, the packing unit of the sauces, soy sauces and pastes, edible fats and oils and spice products shall not exceed 20 g; nor shall the expiration date of the set as a finished product exceed that of any room temperature or refrigerated products packaged together.

16) Room temperature or refrigerated dried fish/shellfish fillet products and dried fishery products may be stored or distributed as frozen foods in order to maintain their quality, in which case, their expiration dates may not exceed the previous expiration date before frozen.

17) Frozen fishery products may only be distributed at refrigerated temperature within 24 hours after being thawed out; provided, however, that those Modified Atmosphere Packaged (MAP) after thawed for antimicrobial and quality maintenance purposes may be distributed within a specific expiration date if additionally marked with frozen package date; thawed date; and expiration date under the distribution condition from the thawed date (within the expiration date for frozen products). At this time, the thawed fishery products may not be refrozen.

18) Thawed frozen products may not be refrozen; except those that are thawed in order to remove inedible parts, such as internal organs of frozen fishery products, etc., cut frozen meat or remove bones, etc., all of which shall be frozen immediately after such work is done.

19) Frozen or refrigerated products shall be transported in refrigerator or freezer vehicles capable of maintaining proper temperature or other means with equivalent or better effect. Soybean curd, whole soybean curd and *muk* (starch jellies) shall be transported in a refrigerator vehicle in order to maintain quality for 4 or more hour-long distance sales. Processed soy bean curds hall also be transported using a refrigerator vehicle to maintain quality.

20) For products vulnerable to moisture absorption, precautions shall be taken to avoid such absorption.

21) Special attention shall be given to avoid breakage of containers/packages in the

transportation and package process; and products shall be kept free from severe impacts as much as possible. In addition, canned products shall be stored to ensure no rust or corrosion occurs on the outside.

22) Expiration dates of products shall be set by manufacturers/processors, meat packaging operators, meat distributors, wholesale egg distributors, on-site meat processors/distributors, and importers of the corresponding products (only in cases where preservation and distribution temperatures of imported refrigerated foods are different from those set in Korea, and such foods are intended to be distributed at the preservation and distribution temperature set in Korea; or where a separate expiration date is set for imported foods within the expiration date established by the manufacturer) to prevent hazard and ensure quality, in light of characteristics of products, such as packing materials, preservation conditions, manufacturing methods and mix ratios of ingredients, etc., and other distribution circumstances, such as refrigeration or freezing preservation, etc.

23) “Expiration date” shall be calculated from the completion of packaging (except, for those subject to additional processing after packaging, such date shall be calculated from the completion of the final process); and for capsule products, from the completion of charging/filling. For the set packaged products with different expiration dates, such as a gift set, the shortest expiration date of any component product shall be regarded as the expiration date; whereas for simply processed products with unchanged shelf-life, such as simple mixtures, etc., the shortest expiration of any ingredient product shall be the expiration date of the finished product. However, products sold as subdivided products shall have the expiration date of the subdivided ingredients; and, for the frozen products released after being thawed (breads, rice cakes, chocolates, salted and fermented seafood products, fruit/vegetable juice, cheeses, butters, or processed fishery products (limited to those hermetically sealed after being sterilized or pasteurized)), the expiration date shall be calculated from the thawed date.

24) In cases where fruit concentrates are imported/stored/kept/transported in ships, etc., temperatures shall conform to those of the storage tank (-5℃ or below); in-house storage tank (0℃ or below); and transportation tank lorry (0℃ or below), respectively. Also, conveyor lines shall be cleaned; and materials and

cleaning agents used for storage/keeping/transportation and for cleaning of the conveyor lines shall conform to the “Standards and Specifications for Food Additives” or the “Standards and Specifications for Food Appartus, Containers and Packages.”

25) Only the fishes that are frozen with salt water for canned fish manufacturing may be transported at a temperature of -9℃ or below. However, during transportation, temperature shall be maintained at -9℃ or below, using sanitary containers and transport covers, etc.

26) Ices shall be stored/distributed at a temperature of -10℃ or below.

27) Packaged livestock products shall not be re-divided and sold in any of the cases except:

(1) Where meat distributors or on-site meat processors/distributors sell the packaged meat after re-cutting or dividing it; and

(2) Where on-site meat processors/distributors sell processed meat products (excluding canned/bottled foods) after producing or re-dividing them.

Also, livestock products without labels shall not be purchased or sold when they are subject to the labeling requirements.

Chapter 3

Standards and Specifications for Long Shelf-Life Foods

Chapter 3. Standards and Specifications for Long Shelf-Life Foods

1. Canned/bottled Foods

"Canned/bottled foods" refers to products that are manufactured by placing foods in a can or bottle; and then degassing, sealing and pasteurizing or sterilizing.

1) Manufacturing/Processing Standards

(1) For sterilization, products shall be heated keeping the center temperature at 120℃ for 4 minutes, or using alternative methods with equivalent or better effect.

(2) Low acid foods with a pH higher than 4.6 shall be marked with a code that indicates content, processing plant and date of manufacture; and records of sterilization process shall be retained.

(3) Acid foods with a pH of 4.6 or less may be pasteurized, such as by heating, etc.

(4) Products shall be pasteurized or sterilized in an adequate method depending on their characteristics in order to increase their preservability; and frozen in an adequate method to prevent discoloration of the content and suppress the growth of thermophilic bacteria.

2) Specifications

(1) Properties and Conditions : Can or bottle caps shall not be expanded or deformed; and the content shall retain its original color and gloss without off-taste or flavor.

(2) Tin (mg/kg) : Not more than 150 (only applicable to canned products except aluminum cans; for acid canned foods, tin shall not exceed 200)

(3) Bacteria : Bacterial growth shall be negative.

2. Retort Foods

"Retort foods" refers to products that are produced by filling manufactured/processed or cooked foods into a single layer plastic film, or metal foil, or in a pouch- or other-shaped container formed by bonding multiple layers of the film; and

subsequently sealing and heating/pasteurizing or sterilizing them.

1) Manufacturing/Processing Standards

(1) For sterilization, products shall be heated, keeping the center temperature at 120℃ for 4 minutes, or using alternative methods with equivalent or better effect. Low acid foods with a pH exceeding 4.6 shall be marked with a code that indicates content, processing plant, date of manufacture; and records of sterilization process shall be retained. Acid foods with a pH of 4.6 or less may be pasteurized, such as by heating, etc.

(2) Products shall be pasteurized or sterilized in an adequate method depending on their characteristics in order to increase their preservability; and frozen in an adequate method to prevent discoloration of the content and suppress the growth of thermophilic bacteria.

(3) No preservatives shall be used.

2) Specifications

(1) Properties and Conditions： Product shapes shall not be expanded or deformed; and the content shall retain its original flavor, color and gloss as well as material properties without off-taste or flavor.

(2) Bacteria： Bacterial growth shall be negative.

(3) Tar color： Shall not be detected

3. Frozen Foods

"Frozen foods" refers to products that are produced by manufacturing/processing or cooking foods and subsequently freezing and storing them at freezing temperature for long shelf-life, which are placed in a container/package.

(1) Frozen foods for consumption without heating: Those frozen foods intended for direct consumption without an additional heating process

(2) Frozen foods for consumption after heating: Those frozen foods that need an additional heating process before consumption

1) Manufacturing/Processing Standards

(1) Pasteurized products shall be heated and pasteurized, keeping the center

temperature at 63℃ or above for 30 minutes, or using alternative methods with equivalent or better effect.

2) Specifications (except for meat, milk products, processed meat products, processed egg products, processed fish meat products (unpasteurized) and other processed foods of animal origin (unpasteurized))

(1) Frozen foods for consumption without heating

① Bacterial count: n=5, c=2, m=100,000, M=500,000 (except for fermented products and those added with fermented products or lactic acid bacteria)

② Coliforms: n=5, c=2, m=10, M=100 (applicable to pasteurized products)

③ *Escherichia coli*: n=5, c=2, m=0, M=10 (except for pasteurized products)

④ Lactic acid bacterial count: Not less than the indicated amount (applicable to products containing lactic acid bacteria)

(2) Frozen foods for consumption after heating

① Bacterial count: n=5, c=2, m=1,000,000, M=5,000,000 (for pasteurized products, n=5, c=2, m=100,000, M=500,000; except for fermented products and those added with fermented products or lactic acid bacteria)

② Coliforms: n=5, c=2, m=10, M=100 (applicable to pasteurized products)

③ *Escherichia coli*: n=5, c=2, m=0, M=10 (except for pasteurized products)

④ Lactic acid bacterial count: Not less than the indicated amount (applicable to products containing lactic acid bacteria)

Chapter 4

Standards and Specifications for Each Food Products

Chapter 4. Standards and Specifications for Each Food Product

1. Confectioneries, Breads or Rice Cakes

1) Definition

Confectioneries, breads or rice cakes refers to Confectionery, Candies, Chewing gum, Breads and Rice cakes that are processed using grain flour, sugar, eggs and milk products, etc. as main ingredients.

2) Requirements for Ingredients, etc.

(1) Perishable and easily spoiled ingredients shall be refrigerated or frozen.

3) Manufacturing/Processing Standards

(1) When manufacturing jellies such as cup jelly, etc., that can be consumed by inhaling, their sizes shall conform to one of the following specifications:

① The minimum internal diameter of the side contacting the lid shall be at least 5.5 cm; and the minimum internal diameter of the height and bottom shall be at least 3.5 cm.

② The length of the long side shall be at least 10 cm; and width and thickness shall be less than 1.5 cm, respectively.

(2) The following gelling agent may not be used as an ingredient in jellies such as cup jelly, etc.

① Konjac, glucomannan

4) Food Type

(1) Confectionery

Confectionery refers to a product that is manufactured by baking, puffing, or frying, etc. of grain flour, etc., as a main ingredient; or by adding food or food additives thereto; including biscuits, wafers, cookies, crackers, *hangwa* (Korean traditional sweets) and snacks, etc.

(2) Candies

Candies refers to a product that is manufactured by processes such as molding, of saccharides, sugar-alcohol or bean paste, etc. as a main ingredient, added with food or food additives; including candy, caramel, *yanggaeng* (red bean

jelly) and jelly, etc.

(3) Chewing gum

Chewing gum refers to a product processed by adding other food or food additives to a gum base whose main ingredients are natural or synthetic resins, etc.

(4) Breads

Breads refers to a dough fermented or unfermented, made with wheat flour or other grain flour, sugar, fat and oil, and egg, etc. as main ingredients; or a frozen mixture of cream, sugar and egg, etc. as main ingredients; and their cooked products; including loaf bread, cakes, sponge cakes, donuts, pizzas, pies, corn dogs, tiramisu and mousse cakes, etc.

(5) Rice cakes

Rice cakes means a mixture kneaded or cooked products made by adding edible salt, saccharides, grains, pulses, vegetables, fruits or alcoholic beverages, etc. to main ingredients, such as rice flour, glutinous rice flour, potato flour, starch or other grains flour, etc.

5) Specifications

(1) Acid value: Not more than 2.0 (only applicable to fried/oil treated confectionery; for *hangwa* (Korean traditional sweets), not more than 3.0)

(2) Tar colors not permitted : Shall not be detected (only applicable to candies, chewing gum and breads)

(3) Sodium saccharin: Shall not be detected (only applicable to rice cakes)

(4) Antioxidant (g/kg) : No antioxidants shall be detected except for the following (only applicable to chewing gum):

Butylated hydroxyanisole (BHA); Dibutyl hydroxy toluene; Tert-butylhydroquinone	Not more than 0.4 g/kg (when used in combination, the sum of dibutyl hydroxy toluene; butylated hydroxyanisole; and tert-butylhydroquinone shall not exceed 0.4 g/kg.)

(5) Preservatives (g/kg) : No preservatives shall be detected except for the following:

Propionic acid; Sodium propionate; Calcium propionate	Not more than 2.5 (based on propionic acid; only applicable to breads)
Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (based on sorbic acid; only applicable to pastes of beans, such as red beans, etc.)

(6) Bacterial count: n=5, c=2, m=10,000, M=50,000 (only applicable to sealed products of confectionery and candies; excluding fermented and lactic acid bacteria-containing products)

(7) *Staphylococcus aureus*： n=5, c=0, m=0/10 g (only applicable to breads coated or filled with cream)

(8) *Salmonella* spp.: n=5, c=0, m=0/10 g (only applicable to breads coated or filled with cream)

(9) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to rice cakes)

(10) Lactic acid bacteria count: Not less than the indicated amount (only applicable to confectionery and Candy containing lactic acid bacteria)

(11) Crushing strength (Newton): Not more than 5 (only applicable to jelly, such as cup jelly and stick jelly, etc.)

(12) Total aflatoxin (μg/kg): Not more than 15.0 (as the sum of B_1, B_2, G_1 and G_2; however, B_1 shall not exceed 10.0 μg/kg. Only applicable to Confectionery, Candies and Chewing gum containing peanuts and nuts)

(13) Fumonisin (mg/kg): Not more than 1 (as the sum of B_1 and B_2; only applicable to Confectionery, Candies and Chewing gum containing not less than 50% of maize)

(14) Lead (mg/kg): Not more than 1.0 (only applicable to jelly); not more than 0.2 (only applicable to Candy)

6) Test Methods

(1) Acid value

Take an appropriate amount of sample into an Erlenmeyer flask to obtain the necessary amount of fat and oil by grinding or slicing. Add purified ether to

immerse the sample and allow it to stand for approximately 2 hours with occasional shaking. Filter the sample with dry filter paper in order to prevent spillover of solids of the sample. Then, add purified ether (approx. half of the previous amount) to the sample in the Erlenmeyer flask; shake it to mix; and repeat filtration through the same filter paper. Transfer the filtrate into a separatory funnel; add water in the amount equivalent to approximately 1/2~1/3 of the filtrate; shake well to clean; and discard the water layer. Repeat this procedure two times. Collect the ether layer; dehydrate the solution with anhydrous sodium sulfate; pass it through nitrogen gas or carbon dioxide, while reducing pressure in water bath at 40℃ to completely remove ether. Take approximately 10 g of remaining fat and test it according to "Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.1 Acid Value." Note that "S" in the formula means a gram of fat and oil.

(2) Tar colors not permitted

Test the sample according to "Chapter 7. General Test Methods, 3.4 Color Additives."

(3) Saccharin sodium

Test the sample according to "Chapter 7. General Test Methods, 3.2.1 Saccharin Sodium."

(4) Antioxidant

Test the sample according to "Chapter 7. General Test Methods, 3.3 Antioxidant."

(5) Preservatives

Test the sample according to "Chapter 7. General Test Methods, 3.1 Preservatives."

(6) Bacterial count

Dissolve the sample completely at 40℃ or below in a short period of time and take 10 mL of the dissolved solution into a bottle. Add steril phosphate buffered dilution water or sterile normal saline to make the final volume of 100 mL. Using this solution as the test solution, test it according to "Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count."

(7) *Staphylococcus aureus*

Take 10 g of cream at random from a product coated or filled with cream;

add 90 mL of sterile normal saline and homogenize it. Using this solution as a test solution, test it according to “Chapter 7. General Test Methods, 4.12 *Staphylococcus Aureus*, 4.12.1 Qualitative Test.”

(8) *Salmonella* spp.

Take 10 g of cream at random from a product coated or filled with cream. Test this sample according to “Chapter 7. General Test Methods, 4.11 *Salmonella* spp..”

(9) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(10) Lactic acid bacteria count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count.”

(11) Crushing strength

Test the sample according to “Chapter 7. General Test Methods, 1.5 Tests for Physical Properties of Jelly.”

(12) Aflatoxin

Test the sample according to “Chapter 7. General Test Methods, 9.1 Mycotoxin.”

(13) Fumonisin

Test the sample according to “Chapter 7. General Test Methods, 9.1 Mycotoxin.”

(14) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

2. Frozen Confectioneries

Frozen Confectioneries refers to products intended to be consumed frozen after adding other food or food additives to raw milk, milk products and drinking water; including Ice creams, Frozen confectionery products, Ice cream mixes and Edible ice.

2-1 Ice Creams

1) Definition

Ice creams refers to foods that are produced by adding other food or food additives to raw milk and milk products used as ingredients and then freezing and hardening the mixture; and as for lactic acid bacteria (including lactobaccillius, lactococcus, bifidobacteria) containing products, ice creams labelled as products containing lactic acid bacteria or fermented milk.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) When using eggs, the surface of the eggs shall be washed/disinfected before use.

(2) Pasteurization shall be performed, keeping the center temperature of the product at 68.5°C for not less than 30 minutes or using alternative methods with equal or better effect; (except that pasteurization process may be omitted for lactic acid bacteria-containing products as necessary).

(3) When adding other ingredients after pasteurization, precautions shall be taken to avoid microbial contamination.

(4) At the time of manufacturing, the non-fat milk solids of the finished product shall contain not less than 75% (by weight) components with the same specifications as those for skim milk powder (except frozen confectionery products).

(5) Hardening or freezing process may be omitted depending on the characteristics of a product, such as sherbets and soft-serve ice creams, etc.

4) Food Type

(1) Ice cream

It refers to ice creams containing not less than 6% milk fat and not less than 16% milk solids.

(2) Low-fat ice cream

It refers to ice creams containing not more than 2% crude fat and not less than 10% non-fat milk solids.

(3) Ice milk

It refers to ice creams containing not less than 2% milk fat and not less than 7% milk solids.

(4) Sherbet

It refers to ice creams containing not less than 2% non-fat milk solids.

(5) Non-fat ice cream

It refers to ice creams containing not less than 5% crude fat and not less than 5% non-fat milk solids.

5) Specifications

(1) Milk fat (%): Not less than 2.0 (only applicable to Ice milk);
Not less than 6.0 (only applicable to Ice cream)

(2) Crude fat (%): Not more than 2.0 (only applicable to Low-fat ice cream)

(3) Bacterial count: n=5, c=2, m=10,000, M=100,000 (except for products containing lactic acid bacteria or fermented milk)

(4) Coliforms: n=5, c=2, m=10, M=100

(5) Lactic acid bacteria count: Not less than the indicated amount (only applicable to products containing lactic acid bacteria)

(6) *Listeria monocytogenes*： n=5, c=0, m=0/25g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

2-2 Ice Cream Mixes

1) Definition

Ice cream mixes refers to liquid products produced by adding other food or food additives to raw milk and milk products, etc., used as ingredients, and then mixing and pasteurizing/sterilizing the mixture; and powder products by drying and grinding such mixture into powder, both of which turn into ice creams when frozen directly or after added with water.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) When using eggs, the surface of the eggs shall be washed/disinfected before use.

(2) Pasteurization shall be performed at 68.5°C for not less than 30 minutes or using alternative methods with equal or better effect; (except that pasteurization process may be omitted for lactic acid bacteria-containing products as necessary).

(3) When adding other ingredients after pasteurization, precautions shall be taken to avoid microbial contamination.

(4) When manufactured, the non-fat milk solids of the finished product shall contain not less than 75% (by weight) components with the same specifications as those for skim milk powder.

4) Food Type

(1) Ice cream mix

It refers to ice cream mixes containing not less than 6% milk fat (not less than 18% for powder products) and not less than 16% milk solids (not less than 48% for powder products).

(2) Low-fat ice cream mix

It refers to ice cream mixes containing not more than 2% crude fat and not less than 10% non-fat milk solids.

(3) Ice milk mix

It refers to ice cream mixes containing not less than 2% milk fat (6% for powder products) and not less than 7% milk solids (21% for powder products).

(4) Sherbet mix

It refers to ice cream mixes containing not less than 2% non-fat milk solids (6% for powder products).

(5) Non-fat ice cream mix

It refers to ice cream mixes containing not less than 5% crude fat (15% for powder products) and not less than 5% non-fat milk solids (15% for powder products).

5) Specifications

(1) Milk fat (%)

① Ice cream mix : Not less than 6.0 (However, not less than 18.0 for powder products)

② Ice milk mix : Not less than 2.0 (However, not less than 6.0 for powder products)

(2) Crude fat (%): Not more than 2.0 (only applicable to low-fat ice cream mix)

(3) Bacterial count: n=5, c=2, m=10,000, M=100,000 (n=5, c=0, m=0, for sterilized products; excluding products containing lactic acid bacteria and fermented milk)

(4) Coliforms: n=5, c=2, m=10, M=100 (except for sterilized products)

(5) Lactic acid bacteria count: Not less than 10,000,000/1 mL (only applicable to products containing lactic acid bacteria);

Not less than 3,000,000/1 mL (only applicable to powder products containing lactic acid bacteria)

(6) Water (%): Not more than 5.0 (only applicable to powder products)

(7) *Salmonella* spp.： n=5, c=0, m=0/25g

(8) *Listeria monocytogenes*：n=5, c=0, m=0/25g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

2-3 Frozen Confectionery Products

1) Definition

Frozen confectionery products refers to foods that are produced by mixing other food or food additives into drinking water and then freezing it.; and are not applicable to those set forth in 2-1~2-2.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Frozen confectionery products shall be frozen after pasteurization by heating for 30 minutes keeping the center temperature at 63℃ or above, or using alternative methods with equal or better effect.

4) Food Type

5) Specifications

(1) Bacterial count: n=5, c=2, m=10,000, M=50,000 (only applicable to sealed products; excluding products containing fermented products or lactic acid bacteria)

(2) Coliforms: n=5, c=2, m=0, M=10

(3) Lactic acid bacteria count: Not less than the indicated amount (only applicable to products containing lactic acid bacteria)

6) Test Methods

(1) Bacterial count

Dissolve the sample completely at 40°C or below in as short time as possible and take 10 mL of the dissolved solution into a bottle. Add sterile phosphate buffered dilution water or sterile normal saline to make the final volume of 100 mL. Using this solution as a test solution, test it according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial count.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Lactic acid bacteria count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count.”

2-4 Ices

1) Definition

Ices refers to drinking water in frozen form for use in manufacturing/ processing/preparing/storing of foods, etc.; or for direct consumption.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Edible ice

It refers to ice made by freezing drinking water for direct use in manufacturing/processing/preparing, etc. or for direct consumption.

(2) Ice for fishery

It refers to ice used for storage and preservation of fishery products.

5) Specifications

Classification / Items	Edible ice	Ice for fishery
(1) Chloride ion (mg/L)	Not more than 250	—
(2) Nitric nitrogen (mg/L)	Not more than 10.0	—
(3) Ammonia nitrogen (mg/L)	Not more than 0.5	—
(4) Potassium permanganate consumption (mg/L)	Not more than 10.0	—
(5) pH	5.8∽8.5	5.8∽8.5
(6) Residue on evaporation (mg/L)	—	Not more than 1,500
(7) Bacterial count	n=5, c=2, m=100, M=1,000	n=5, c=2, m=100, M=1,000
(8) Coliforms	n=5, c=2, m=0, M=10/50mL	n=5, c=2, m=0, M=10/50mL

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods, 6.1.3 Edible Ice and Ice for Fishery.”

3. Cocoa Products or Chocolates

Cocoa products or chocolates refers to Cocoa mass, Cocoa butter and Cocoa powder derived from seeds of cacao (*Theobroma cacao*), as well as Other cocoa products, Chocolate, Milk chocolate, White chocolate and Semi-chocolate and Processed chocolate products produced by adding food or food additives thereto.

3-1 Processed Cocoa Products

1) Definition

Cocoa products refers to coca mass, cocoa butter, cocoa powder and other processed cocoa products derived from cacao seeds.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Alcohol components shall not be added; provided, however, that for manufacturing process, alcohol content of less than 1% (as alcohol component) may be used for taste, flavor enhancement or odor removal, etc.

4) Food Type

(1) Cocoa mass

It refers to cacao seeds in fine powder or semi-liquid form produced by shelling and grinding cacao seeds; or lumps made by hardening such liquid.

(2) Cocoa butter

It refers to a fat derived from cacao seeds by compression or solvent extraction after shelling.

(3) Cocoa powder

It refers to a product made by roasting and shelling cacao beans and removing fats therefrom to obtain a lump, then making it into powder.

(4) Other cocoa products

Other cocoa products refers to products made by simply processing ingredients derived from cacao seeds, such as by grinding or compression, etc., or a mixture made by adding food or food additives, etc. to such products, other than cocoa mass, cocoa butter and cocoa powder. However, it excludes those falling under the category of Chocolates, Confectioneries, Breads or Rice cakes, etc.

5) Specifications

(1) Lead (mg/kg): Not more than 2.0 (only applicable to Cocoa powder)

(2) Iodine value: 33~42 (only applicable to Cocoa butter)

(3) *Salmonella* spp.: n=5, c=0, m=0/25 g

6) Test Methods

(1) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(2) Iodine value

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.3 Iodine Value.”

(3) *Salmonella* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

3-2 Chocolates

1) Definition

Chocolates refers to Chocolate, Milk chocolate, White chocolate, Semi-chocolate and Processed chocolate products that are processed by adding food or food additives to Processed cocoa products.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Alcohol components shall not be added; provided, however, that for manufacturing process, alcohol content of less than 1% (as alcohol component) may be used for taste, flavor enhancement or odor removal, etc.

4) Food Type

(1) Chocolate

It refers to a product with a cocoa solids content of not less than 30% (with not less than 18% cocoa butter and not less than 12% non-fat cocoa solids) that are produced by adding food or food additives, etc. to Processed cocoa products.

(2) Milk chocolate

It refers to a product with a cocoa solids content of not less than 20% (with not less than 2.5% non-fat cocoa solids) and a milk solids content of not less than 12% (with not less than 2.5% milk fat content), which are produced by adding food or food additives, etc. to Pocessed cocoa products.

(3) White chocolate

It refers to a product with a cocoa butter content of not less than 20% and a milk solids content of not less than 14% (with not less than 2.5% milk fat content), which are produced by adding food or food additives, etc. to Processed cocoa products.

(4) Semi-chocolate

It refers to a product with a cocoa solids content of not less than 7% that are produced by adding food or food additives, etc. to Processed cocoa products.

(5) Processed chocolate products

Processed chocolate Products refers to composite food products that are processed by mixing, coating or filling, etc., the foods for human consumption, such as nuts, candies, biscuits, etc., with the chocolates specified in (1) (Chocolate)~(4) (Semi-chocolate); and that have a cocoa solids content of not

less than 2%.

5) Specifications

(1) Tar colors not permitted: Shall not be detected

(2) Bacterial count: n=5, c=2, m=10,000, M=50,000 (only applicable to sealed products; excluding products containing fermented products or lactic acid bacteria)

(3) Lactic acid bacteria count: Not less than the indicated amount (only applicable to products containing lactic acid bacteria)

(4) *Salmonella* spp.: n=5, c=0, m=0/25 g

6) Test Methods

(1) Tar colors not permitted

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(2) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) Lactic acid bacteria count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count.”

(4) *Salmonella* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

4. Saccharidess

Saccharidess refers to Sugar, Sugar syrups, Oligosaccharides, Glucose, Fructose and Taffies obtained by processing starch ingredients or sugar solutions; or Processed saccharide products processed therefrom.

4-1 Sugars

1) Definition

Sugars refers to sugar or other sugar refined from sugar solutions or raw sugar derived from sugar cane or sugar beets, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Manufacturing of Sugar shall involve the processes of dissolution, filtration and crystallization.

4) Food Type

(1) Sugar

It refers to crystallized, powdered or lump form of products, which is made by refining/processing sugar solution or raw sugar. (100% sugar solution or raw sugar)

(2) Other sugar

Other sugar refers to a product made by refining/processing sugar solution or raw sugar, and mixing with food or food additives.

5) Specifications

Items \ Types	Sugar	Other sugar
(1) Properties and conditions	It shall be in colorless~brown crystals, crystalline powder, or lump form with a sweet taste	-
(2) Sugar content(%)	Not less than 99.7 (however, not less than 97.0 in brown sugar)	Not less than 86.0
(3) Sodium saccharin	Shall not be detected	
(4) Lead (mg/kg)	Not more than 0.5	Not more than 1.0
(5) Sulfur dioxide (mg/kg)	Less than 0.020	

6) Test Methods

(1) Sugar content (sugar)

Transfer an exactly 26 g of sample into a 100 mL measuring flask, and add 80 mL of water to completely dissolve the sample. Slowly add 1 mL of alkaline lead acetate solution and fill with water to the marked line. When a layer of foam appears on the surface of the solution, add one drop of ethanol to suppress the foam and vigorously shake it to mix. Add a small amount of diatomite as necessary and filter it with dry filter paper. Discard the 25 mL of initial filtrate. Then, using the next filtrate as a test sample, test it according to "Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.4.1.3 Sucrose, C. Polarimetry."

(2) Sodium saccharin

Test the sample according to "Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin."

(3) Lead

Test the sample according to "Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals."

(4) Sulfur dioxide

Test the sample according to "Chapter 7. General Test Methods, 3.5 Sulfurous Acid, Sodium Hydrosulfite and Its Salts."

4-2 Sugar Syrups

1) Definition

Sugar Syrups refers to liquid products produced by refining and concentrating, etc. the cane juice or maple sap extracted from sugar cane or maple trees, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Total saccharide (%): Not less than 60.0

(2) Lead (mg/kg): Not more than 1.0

(3) Sodium saccharin: Shall not be detected.

6) Test Methods

(1) Total saccharide

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.4.1.3 Sucrose.”

(2) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(3) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin.”

4-3 Oligosaccharides

1) Definition

Oligosaccharides refers to Oligosaccharide and Processed oligosaccharide products that are either sugar solutions obtained through enzyme action for straight or branched chains of not more than 10 saccharide molecules, using saccharide ingredients; or a liquid or powder that is filtered, refined and concentrated from such solution.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Oligosaccharide

It refers to fructooligosaccharide, isomaltooligosaccharide, galactooligosaccharide, maltooligosaccharide, xylooligosaccharide, gentiooligosaccharide, or mixed oligosaccharides that are either sugar solutions obtained through enzyme action for straight or branched chains of sugar molecules, using sugar ingredients; or a liquid or powder that is filtered, refined and concentrated from such solution.

(2) Processed oligosaccharide products

It refers to products that are processed by adding food or food additives to oligosaccharide.

5) Specifications

(1) Oligosaccharide content (%)

① The respective oligosaccharide content of not less than 10 in fructooligosaccharide, isomaltooligosaccharide, galactooligosaccharide, xylooligosaccharide and gentiooligosaccharide

② Maltooligosaccharide: Not less than 40

③ Processed oligosaccharide products: Not less than each oligosaccharide content specified in ①~②

(2) Lead (mg/kg): Not more than 1.0

6) Test Methods

(1) Oligosaccharide

Test the sample according to “Chapter 7. General Test Methods, 6.2.1 Oligosaccharide.”

(2) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

4-4 Glucose

1) Definition

Glucose refers to a product that is produced by filtering, concentrating and refining the saccharide obtained by saccharification of starch as a main ingredient.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Dextrose equivalent (D.E): Not less than 80.0 (only applicable to liquid products)

(2) Sodium saccharin: Shall not be detected

(3) Dextrin powder (%): Not more than 4.0 (only applicable to powder/crystalline products)

(4) Lead (mg/kg): Not more than 0.5

6) Test Methods

(1) Dextrose equivalent (D.E)

Calculate the reducing sugar (as glucose) by testing the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.4.1.2 Reducing Sugar.” Then, calculate the dextrose equivalent (D.E).

$$\text{D.E} = \frac{\text{Reducing Sugar (\% as Glucose)}}{\text{Saccharide Solids in the Sample (\%)}} \times 100$$

(2) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin.”

(3) Dextrin powder

Test the sample according to “Chapter 7. General Test Methods, 6.2.2 Glucose.”

(4) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

4-5 Fructoses

1) Definition

Fructoses refers to products produced by isomerization of glucose obtained by saccharification of starch as a main ingredient; or those produced by processing a sugar solution obtained by hydrolysis of sugar.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Fructose

It refers to crystalline or powder products produced by crystallizing and drying the concentrated liquid produced by isomerization of glucose, which is obtained by saccharification, filtering, refining and concentrating starch or by hydrolysis of sugar.

(2) Other fructose

It refers to a concentrated liquid product produced by isomerization of glucose obtained by saccharification, filtering, refining and concentrating starch; or a mixture obtained by adding food or food additives to thereto or to fructose.

5) Specifications

Item \ Type	Fructose	Other fructose
(1) Fructose (%)	Not less than 98.0 (as in anhydrous state)	Not less than 35.0 (as in anhydrous state)
(2) Specific rotation $[\alpha]_D^{20}$	-89.0~-93.5	-
(3) Sodium saccharin	Not detected	
(4) Lead (mg/kg)	Not more than 0.5	Not more than 0.5

6) Test Methods

(1) Fructose

Test the sample according to “Chapter 7. General Test Methods, 6.2.3 Fructose.”

(2) Specific rotation

Precisely measure 10 g of sample as in anhydrous state (Convert the amount according to the sample's water content) and dissolve it in water. Then, add 0.2 mL of ammonia test solution and water to make a 100 mL solution. Next, measure its optical rotation at 20°C using a 200 mm polarimeter, and multiply it by 5 to get the specific rotation

(3) Sodium saccharin

Test the sample according to "Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin."

(4) Lead

Test the sample according to "Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals."

4-6 Taffies (*Yeot*)

1) Definition

Taffies (*yeot*) refers to starch syrups, other taffies and dextrin that are produced by processing a sugar solution obtained by enzyme or acid hydrolysis of starch or starch ingredients as main ingredients.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Starch syrup

Starch Syrup refers to a thick and viscous liquid filtered and concentrated after the enzyme or acid hydrolysis of starch or grain flour and starch ingredients; or a processed product of hydrolyzate.

(2) Other taffies

Other taffies refers to a product made by processing Starch syrup or a mixture obtained by adding food or food additives thereto.

(3) Dextrin

Dextrin refers to a processed hydrolyzate that is obtained by enzyme or acid hydrolysis of starch or grain flour.

5) Specifications

Type / Item	Starch syrup	Other taffies	Dextrin
(1) Dextrose equivalent (D.E)	Not less than 20.0	Not less than 10.0	Less than 20.0
(2) Sodium saccharin	Shall not be detected		
(3) Lead (mg/kg)	Not more than 1.0		

6) Test Methods

(1) Dextrose equivalent (D.E)

Test the sample according to “4-4. Glucose, 6) Test Methods, (1) Dextrose Equivalent (D.E).”

(2) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin.”

(3) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

4-7 Processed Saccharide Product

1) Definition

Processed saccharide product refers to products produced using sugars, glucose, fructoses, taffies, sugar syrups and oligosaccharides as main ingredients. However, for those for which separate Standards and Specifications have been established, such Standards and Specifications shall apply.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Heavy metals (mg/kg)： Not more than 10

(2) Coliforms： n=5, c=1, m=0, M=10 (only applicable to pasteurized products.)

(3) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized products)

(4) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products for direct consumption without further processing or heating)

6) Test Methods

(1) Heavy metals

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(4) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

5. Jams

1) Definition

Jams refers to products that are manufactured by jellifying or making syrups with fruits, vegetables, milk products, etc., by adding saccharides, etc.; and includes Jam and Other jams.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) After pasteurization, products shall be cooled down in order to maintain the products' quality and inhibit the growth of thermophilic bacteria.

4) Food Type

(1) Jam

Jam refers to a product manufactured by jellifying fruits or vegetables (not less than 30% based on fresh weight) together with saccharides.

(2) Other jam

Other jam refers to products manufactured by processing fruits, vegetables, milk products, etc. with/without the addition of saccharides; including syrups (not less than 20% based on fresh weight), fruit pie fillings and milk jams, etc.

5) Specifications

(1) Tar colors: Shall not be detected (except other jams)

(2) Preservatives (g/kg) : No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (as sorbic acid)
Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 1.0 (as benzoic acid)
Methyl ρ-Hydroxybenzoate; Ethyl ρ-Hydroxybenzoate	Not more than 1.0 (as parahydroxybenzoic acid)
Propionic acid; Sodium propionate; Calcium propionate	Not more than 1.0 (as propionic acid)
The above preservatives when used together	Not more than 1.0 (as the sum of sorbic acid, benzoic acid, parahydroxybenzoic acid and propionic acid)

(3) Lead (mg/kg): Not more than 1.0

6) Test Methods

(1) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(2) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(3) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

6. Soybean Curds or *Muk* (Starch Jellies)

1) Definition

Soybean curds refers to products manufactured/processed by coagulating soy milk that is obtained by using pulses as main ingredients; and includes Soybean curds, Yuba and Processed soybean curd. *Muk* (starch jellies) refers to those manufactured using starch ingredients or polysaccharides as main ingredients.

2) Requirements for Ingredients, etc.

(1) Foreign matters, such as soil, sand and straw, etc. shall be sufficiently removed from ingredients by pre-treatment process

(2) Soybean powder used as ingredient shall be vacuum-packed; nitrogen filled after vaccum packed; or distributed/stored in refrigerated conditions.

3) Manufacturing/Processing Standards

(1) It is recommended to pack finished products.

(2) Unpackaged Soybean curd shall have the name of manufacturer or trademark embossed/indicated in order to distinguish it from those by other manufacturers.

(3) Only the soybean milk that has been heat treated or treated with equal or better effect shall be used in manufacture of Yuba.

(4) Only the seawater (including underground brine) that meets the Water Standards set forth in the “Enforcement Decree of the Framework Act on Environmental Policy, [Annex] Environmental Standards 3. D. 1) and 4) ” shall be used in manufacture of Soybean curd.

4) Food Type

(1) Soybean curd

It refers to a product coagulated by adding coagulant to soy milk obtained from pulses (including soy bean powder; 100%, excluding table salt)

(2) Yuba

It refers to a film obtained by heating pulses at constant temperature or a

product produced by processing such film.

(3) Processed soybean curd

It refers to a product produced by adding other food during manufacturing of Soybean curd; or by adding other food or food additives to Soybean curd and processing it; (provided that Soybean curd shall be not less than 30%)

(4) *Muk* (starch jellies)

Muk (starch jelies) means products processed by using starch ingredients, algae or konjac (*Amorphophallus konjac*) as main ingredients.

5) Specifications

(1) Heavy metals (mg/kg): Not more than 3.0

(2) Coliforms: n=5, c=1, m=0, M=10 (only applicable to filled-and sealed-packaged products)

(3) Tar colors: Shall not be detected.

6) Test Methods

(1) Heavy metals

Test the sample according to “Chapter 7. General Test Methods, 10.1.2.8 Test for Heavy Metals.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4.7 Coliforms.”

(3) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

7. Edible Fats and Oils

Edible Fats and Oils refers to products that are produced by manufacturing/processing crude oil, obtained from ingredients containing fats and oils, suitable for human consumption; or those made by adding food or food additives to such products; and includes Vegetable fats and oils, Animal fats and oils and Processed edible fat and oil products.

7-1 Vegetable Fats and Oils

1) Definition

Vegetable fats and oils refers to products produced by processing crude oil, obtained from plants (including crushed powder) containing fats and oils, suitable for human consumption; or those manufactured/processed by using such products as ingredients; and includes Soybean oil, Corn oil, Rapeseed oil, Rice bran oil, Sesame oil, Extracted sesame oil, Perilla oil, Extracted perilla oil, Safflower oil, Sunflower oil, Cottonseed oil, Peanut oil, Olive oil, Palm oils, Coconut oil and Hot pepper seed oil, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Crude oil collected through extraction, etc., shall go through degumming, deacidification, decolorization, or deodorization, or other combined refining processes with equal or better effect.

(2) Crude oil obtained through compression or using carbon dioxide (supercritical extraction) shall go through processes such as standing and filtration, etc. to remove any deposits.

(3) Glycerine shall not be used to adjust acid value during the refining process of Rice bran oil.

(4) Sesame oil and Perilla oil obtained through compression or using carbon dioxide (supercritical extraction) shall never be mixed with other edible fats and oils.

(5) Extracting solvents, carbon dioxide and sodium hydroxide, etc. that are used

during manufacturing process shall be treated to meet the use standards of the Standards and Specifications for Food Additives.

4) Food Type

(1) Soybean oil

Soybean oil refers to crude oil obtained from soybeans and treated to be fit for human consumption.

(2) Corn oil (corn germ oil)

It refers to crude oil obtained from corn germs and treated to be fit for human consumption.

(3) Rapeseed oil (canola oil)

It refers to crude oil obtained from rape and treated to be fit for human consumption.

(4) Rice bran oil (brown rice oil)

It refers to crude oil obtained from rice bran and treated to be fit for human consumption.

(5) Sesame oil

It refers to pressed sesame oil obtained by pressing sesame seeds; or supercritical-extracted sesame oil extracted using carbon dioxide (supercritical extraction).

(6) Extracted sesame oil

It refers to crude oil extracted from sesame seeds and refined.

(7) Perilla oil

It refers to pressed perilla oil obtained by pressing perilla seeds; or supercritical-extracted perilla oil extracted using carbon dioxide (supercritical extraction).

(8) Extracted perilla oil

It refers to crude oil extracted from perilla seeds and refined.

(9) Safflower oil

It refers to crude oil obtained from safflower seeds and treated to be fit for human consumption; it includes safflower oil and high oleic safflower oil.

(10) Sunflower oil

It refers to crude oil obtained from sunflower seeds and treated to be fit for human consumption; it includes sunflower oil (including pressed sunflower oil) and high oleic sunflower oil.

(11) Cottonseed oil

It refers to crude oil obtained from cottonseeds and treated to be fit for human consumption; it includes cottonseed oil, cottonseed salad oil and cottonseed stearin oil.

(12) Peanut oil

It refers to crude oil obtained from peanuts and treated to be fit for human consumption.

(13) Olive oil

It refers to oil obtained by physically or mechanically pressing/filtering or refining olives; or by mixing thereof.

(14) Palm oils

It refers to palm oil obtained from palm fruits; palm olein oil or palm stearin oil obtained through fractionation of palm oil; and palm kernel oil obtained from palm kernels.

(15) Coconut oil

It refers to crude oil obtained from coconut meat and treated to be fit for human consumption

(16) Hot pepper seed oil

It refers to crude oil obtained from hot pepper seeds and treated to be fit for human consumption.

(17) Other vegetable fats and oils

It refers to crude oil obtained from a single ingredient of plant origin and treated to be fit for human consumption; or that obtained from defatted meal after oil pressing, and refined to be fit for human consumption. However, for those for which separate Standards and Specifications have been established, such Standards and Specifications shall apply.

5) Specifications

Item \ Type	Soybean oil	Corn oil	Rapeseed oil	Rice bran oil
(1) Acid value	Not more than 0.6 (not more than 4.0 for pressed oil)			
(2) Iodine value	123~142	103~130	95~127	92~115

Item \ Type	Sesame oil	Extracted sesame oil	Perilla oil	Extracted perilla oil
(1) Acid value	Not more than 4.0	Not more than 0.6	Not more than 5.0	Not more than 0.6
(2) Iodine value	103~118	103~118	160~209	160~209
(3) Antioxidant (g/kg)	-	-	No antioxidants shall be detected except for the following.	
			Butylated hydroxyanisole (BHA); Dibutyl hydroxy toluene; Tert-butylhydroquinone	Not more than 0.2 (When used in combination, the sum of butylated hydroxyanisole (BHA); dibutyl hydroxy toluene; and tert-butylhydroquinone shall not be more than 0.2.)
			Propyl gallate	Not more than 0.1
(4) Linolenic acid (%)*	Not more than 0.5	-	-	-
(5) Erucic acid(%)	Shall not be detected	-	-	-

* Linolenic acid content in palmitic acid ($C_{16:0}$), stearic acid ($C_{18:0}$), oleic acid ($C_{18:1}$), linoleic acid ($C_{18:2}$), linolenic acid ($C_{18:3}$), arachidonic acid ($C_{20:0}$)

Item \ Type	Safflower oil	Sunflower oil	Cottonseed oil
(1) Acid value	Not more than 0.6 (not more than 4.0 for pressed oil)		
(2) Iodine value	140~150 (80~100 for high oleic products)	120~142 (78~90 for high oleic products)	102~120 (83~105 for cottonseed stearin oil, 105~123 for cottonseed salad oil)
(3) Cold test	—	—	Shall be clear and transparent for 5 hours and 30 minutes (limited to cottonseed salad oil)

Item \ Type	Peanut oil		Olive oil
(1) Acid value	Not more than 0.6 (not more than 2.0 for blended oil and pressed oil)		
(2) Iodine value	84~103		75~94
(3) Antioxidant (g/kg)	No antioxidants shall be detected except for the following.		-
	Butylated hydroxyanisole (BHA); Dibutyl hydroxy toluene; Tert-butylhydro quinone	Not more than 0.2 (When used in combination, the sum of butylated hydroxyanisole (BHA); dibutyl hydroxy toluene; and tert-butylhydroquinone shall not be more than 0.2.)	
	Propyl gallate	Not more than 0.1	

Item \ Type	Palm oil	Palm olein oil	Palm stearin oil	Palm kernel oil
(1) Acid value	Not more than 0.6 (not more than 4.0 for pressed oil)			
(2) Iodine value	-	Not more than 5.0	Not more than 3.0	-
(3) Antioxidant (g/kg)	44~60	-	-	14~22

<table>
<tr><th>Type
Item</th><th>Coconut oil</th><th>Hot pepper seed oil</th><th colspan="2">Other vegetable fats and oils</th></tr>
<tr><td>(1) Acid value</td><td>Not more than 0.6 (not more than 4.0 for pressed oil)</td><td>Not more than 0.6 (not more than 3.0 for pressed oil)</td><td colspan="2">Not more than 0.6 (not more than 4.0 for pressed oil)</td></tr>
<tr><td>(2) Peroxide value</td><td>-</td><td></td><td colspan="2"></td></tr>
<tr><td>(3) Iodine value</td><td>7~11</td><td>120~139</td><td colspan="2"></td></tr>
<tr><td rowspan="3">(4) Antioxidant (g/kg)</td><td rowspan="3">-</td><td rowspan="3">-</td><td colspan="2">No antioxidants shall be detected except for the following</td></tr>
<tr><td>Butylated hydroxyanisole (BHA); Dibutyl hydroxy toluene; Tert-butylhydroquinone</td><td>Not more than 0.2 (When used in combination, the sum of butylated hydroxyanisole (BHA); dibutyl hydroxy toluene; and tert-butylhydroquinone shall not be more than 0.2.)</td></tr>
<tr><td>Propyl gallate</td><td>Not more than 0.1</td></tr>
</table>

6) Test Methods

(1) Acid value

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.1 Acid Value.”

(2) Iodine value (Wijs method)

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.3 Iodine Value.”

(3) Cooling test

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.3.1.1 Cooling Test.”

(4) Crude fat

Test the sample according to “Chapter 7. General Test Methods, 6.3.1.2 Crude Fat.”

(5) Antioxidant

Test the sample according to “Chapter 7. General Test Methods, 3.3 Antioxidant.”

(6) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(7) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(8) Peroxide value

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.5 Peroxide Value.”

(9) Linolenic acid

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.4 Fatty Acid.”

(10) Erucic acid

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.4 Fatty Acid.”

7-2 Animal Fats and Oils

1) Definition

Animal fats and oils refers to crude oil obtained from ingredients of animal origin containing fat and oil; or products manufactured/processed using such fat and oil as ingredients—including edible beef tallow and edible lard, etc.

2) Requirements for Ingredients, etc.

(1) Raw fat (suet), raw beef tallow or raw lard shall be used after physico-chemical testing as necessary.

(2) Raw beef tallow or raw lard shall not share the same package or container; container/packages shall be hygienic such that they can protect against leakage, oxidation, and contamination of contents, etc.

3) Manufacturing/Processing Standards

(1) Raw beef tallow shall go through degumming, deacidification, decolorization, or deodorization, or other combined refining processes with equal or better effect.

4) Food Type

(1) Edible beef tallow

It refers to a product processed by treating raw beef tallow to be fit for human consumption.

(2) Edible lard

It refers to a product processed by treating raw lard to be fit for human consumption.

(3) Raw beef tallow

It refers to a raw material of edible beef tallow processed and rendered from raw fat (an ingredient for raw beef tallow as adipose tissues of beef cattle).

(4) Raw lard

It refers to a raw material of edible lard processed and rendered from raw fat (an ingredient for raw lard as adipose tissues of pigs).

(5) Other animal fats and oils

Other animal fats and oils refers to products that are raw fat obtained from

animal ingredients and treated to be fit for human consumption; other than edible beef tallow and edible lard.

5) Specifications

<table>
<tr><th>Item \ Type</th><th>Edible beef tallow</th><th>Edible lard</th><th>Raw beef tallow</th><th>Raw lard</th><th>Other aniaml fats and oils</th></tr>
<tr><td>(1) Specific gravity (40°C/20°)</td><td>0.893～0.904</td><td>0.894～0.906</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>(2) Refractive gravity (40°C)</td><td>1.448～1.460</td><td>1.448～1.461</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>(3) Water (%)</td><td colspan="2">Not more than 0.3</td><td colspan="2">Not more than 0.7</td><td>-</td></tr>
<tr><td>(4) Unsaponifiable matter (%)</td><td colspan="2">Not more than 1.2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>(5) Acid value</td><td colspan="2">Not more than 0.3</td><td colspan="2">Not more than 4.0</td><td>Not more than 0.6 (Not more than 4.0 for pressed oil)</td></tr>
<tr><td>(6) Saponification value</td><td>190～202</td><td>192～203</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>(7) Iodine value</td><td>32～50</td><td>45～70</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td rowspan="3">(8) Antioxidant (g/kg)</td><td colspan="5">No antioxidants shall be detected except for the following</td></tr>
<tr><td>Butylated hydroxyanisole (BHA); Dibutyl hydroxy toluene; Tert-butylhydroquinone</td><td colspan="4">Not more than 0.2 (When used in combination, the sum of butylated hydroxyanisole (BHA); dibutyl hydroxy toluene; and tert-butylhydroquinone shall not be more than 0.2)</td></tr>
<tr><td>Propyl gallate</td><td colspan="4">Not more than 0.1</td></tr>
</table>

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

7-3 Processed Edible Fat and Oil Products

1) Definition

Processed edible fat and oil Products refers to products manufactured/processed by adding food or food additives to vegetables or animal fats and oils as main ingredients; it includes blended edible oil, flavored oil, processed fat and oil, shortening, margarine, vegetable cream and imitation cheese, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Blended edible oil

It refers to a simple mixture of 2 or more types of edible fat and oil, whose product type is specified in this Notification (except for pressed sesame oil, pressed perilla oil and flavored oil).

(2) Flavored oil

It refers to edible oil (except for pressed sesame oil, sesame oil by supercritical extraction, pressed perilla oil and perilla oil by supercritical extraction) blended with spices, flavoring, natural extracts and seasonings, etc. (edible fat and oil content of not less than 50%); and used for flavoring food during food preparation or processing.

(3) Processed fat and oil

It refers to oil refined to be fit for human consumption by changing physical and chemical properties of oil through hydrogenation, fractionation and transesterification of vegetable or animal fats and oils.

(4) Shortening

It refers to vegetable or animal fat and oil in solid or liquid form used with/without the addition of food additives to provide processability, such as plasticity and emulsibility, etc.

(5) Margarine

It refers to products in solid or liquid form produced by mixing vegetable or animal fat and oil (including milk fat) with water, food and food additives, etc. and emulsifying them. (However, in the case milk fat is used as ingredient, the

fat content of the product shall be less than 50% as weight ratio)

(6) Imitation cheese

It refers to a product manufactured by adding food or food additives to edible fat and oil and protein ingredients as main ingredients and emulsifying them.

(7) Vegetable cream

It refers to a product processed by adding food or food additives, such as saccharides, etc., to vegetable fat and oil as a main ingredient; and used as a filling or decoration for cakes or bread, or for enhancing the flavor of coffee or food.

(8) Other edible fat and oil products

Other edible fat and oil products refers to products processed using vegetable or animal fats and oils as main ingredients (except for pressed sesame oil and pressed perilla oil).

5) Specifications

<table>
<tr><th>Type / Item</th><th>Processed fat and oil</th><th>Shortening</th><th>Margarine</th></tr>
<tr><td>(1) Crude fat (%)</td><td>—</td><td>—</td><td>Not less than 80.0 (Except for low fat margarine, which shall be not less than 10.0 and not more than 80.0)</td></tr>
<tr><td>(2) Acid value</td><td>Not more than 0.6</td><td>Not more than 0.8 (except those for restaurant or business use rather than for retail distribution or sale, and that are added with emulsifier, such as lecithin and glycerin esters of fatty acids, etc.)</td><td>Not more than 1.0 (except where milk fat or lecithin or glycerin esters of fatty acids, etc. are used.)</td></tr>
<tr><td>(3) Peroxide value</td><td>Not more than 3.0</td><td>—</td><td>—</td></tr>
<tr><td>(4) Tar color</td><td>—</td><td>—</td><td>Shall not be detected</td></tr>
<tr><td rowspan="2">(5) Antioxidant (g/kg)</td><td colspan="3">No antioxidants shall be detected except for the following.</td></tr>
<tr><td>Butylated hydroxyanisole (BHA); Dibutyl hydroxy toluene;</td><td colspan="2">Not more than 0.2 (When used in combination, the sum of butylated hydroxyanisole (BHA); dibutyl hydroxy toluene; and tert-butylhydroquinone shall not be more than 0.2.)</td></tr>
</table>

Item \ Type	Processed fat and oil	Shortening	Margarine	
	Tert-butylhydroquinone			
	Propyl gallate		Not more than 0.1	
	—	—	Calcium Disodium Ethylenediaminetetraacetate	Not more than 0.1 (When used in combination with disodium ethylenediaminetetraacetate, the sum of disodium ethylenediaminetetraacetate dihydrate shall not be more than 0.1 g/kg)
(6) Preservatives (g/kg)	—	—	No preservatives shall be detected except for the following:	
			dehydroacetic acid; Sodium dehydroacetic acid	Not more than 0.5 (as dehydroacetic acid)
			Benzoic acid; sodium benzoate; potassium benzoate; calcium benzoate	Not more than 1.0 (as benzoic acid)
			Benzoic acid; sodium benzoate; potassium benzoate; calcium benzoate	Not more than 1.0 (as benzoic acid)
			When used in combination with the above (benzoic acid and sorbic acid-type)	Not more than 1.0 [as the sum of benzoic acid and sorbic acid. However, for low fat margarine (fat spread), not more than 2.0 as the sum of benzoic acid and sorbic acid; and benzoic acid shall not be more

Item \ Type	Processed fat and oil	Shortening	Margarine
			preservatives ; than 1.0.]

Item \ Type	Imitation cheese	Vegetable cream
(1) Water (%)	—	Not more than 8.0 (only applicable to powder products)
(2) Coliforms	n=5, c=1, m=0, M=10	n=5, c=1, m=0, M=10 (however, dried products are excluded)
(3) Tar colors not permitted	Shall not be detected	—

Item \ Type	Other edible fat and oil products
(1) Acid value	Not more than 3.0
(2) Heavy metals (mg/kg)	Not more than 10
(3) Coliforms	n=5, c=1, m=0, M=10 (only applicable to pasteurized products)
(4) Bacterial count	n=5, c=0, m=0(only applicable to sterilized products)
(5) *Escherichia coli*	n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products for direct consumption without further processing or heating)

6) Test Methods

(1) Acid value

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.1 Acid Value.”

(2) Peroxide value

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.5 Peroxide Value.”

(3) Iodine value (Wijs method)

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.3 Iodine Value.”

(4) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color

Additives.”

(5) Antioxidant

Test the sample according to “Chapter 7. General Test Methods, 3.3 Antioxidant.”

(6) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(7) Water

Test the sample according to “Chapter 7. General Test Methods, 2.1.1 Water, 2.1.1.1 Loss-on-Drying Method, A. Normal Pressure Oven Drying Method.” However, drying time shall be 1 hour at 105°C.

(8) Heavy metals

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metalss, 10.1.2.8 Heavy Metals.”

(9) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(10) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(11) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

8. Noodles

1) Definition

Noodles refers to products manufactured by extruding, heat-treating and drying, etc., grain flour or starch used as a main ingredient; such as wet noodle, cooked noodle, dried noodle and oil-fried noodle.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Alcohol-treated (using not less than 1% ethyl alcohol content) products shall be treated such that alcohol residues do not affect the quality.

(2) Starch noodles shall be manufactured from not less than 80% starch as a main ingredient.

4) Food Type

(1) Wet noodle

Wet noodle refers to noodle products packaged immediately after extruded from grain flour or starch as a main ingredient; or those only whose surfaces are dried.

(2) Cooked noodle

Cooked noodle refers to products manufactured by cooking noodles made from grain flour or starch as a main ingredient after or during the noodle extrusion process.

(3) Dried noodle

Dried noodle refers to products manufactured by drying wet or cooked noodles and composed of not more than 15% water.

(4) Oil-fried noodle

Oil-Fried noodle refers to products manufactured by frying wet, cooked and dried noodles with oil.

5) Specifications

(1) Tar colors: Shall not be detected

(2) Preservatives: Shall not be detected

(3) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to alcohol-treated products)

(4) Coliforms: n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

6) Test Methods

(1) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(2) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(3) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(4) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

9. Beverages

Beverages means products intended for drinking, including teas, coffee, fruit/vegetable drinks, carbonated beverages, soy milks, fermented beverages, ginseng/red ginseng beverages, etc.

9-1 Teas

1) Definition

Teas refers to indulgence foods that are manufactured/processed using vegetable ingredients as main ingredients; including leached, liquid and solid teas.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Raw ingredients shall be extracted using water, ethyl alcohol or carbon dioxide as solvents and appropriate methods, such as cold-infusion or warm-infusion, etc., depending on the characteristics of raw ingredients.

(2) *Ssanghwa* tea (Korean black Herbal Tea) shall be manufactured using, as ingredients, soluble extracts, extracted and filtered from white paeny root (*Paeonia lactiflora* Pallas); prepared rehmannia roots (*Rehmannia glutinosa* (Gaertn.) Libosch. Ex. Steud.); astragalus roots (*Astragalus membranaceus* Bunge); Korean angelicas roots (*Angelica gigas* Nakai); cnidium rhizomes (*Cnidium officinale* Makino); cinnamon barks (*Cinnamomum cassia* (L.) Presl); and licorice roots (*Glycyrrhiza uralensis* Fischer). Also, it may be added with ginger, jujubes and pine nuts during manufacture.

4) Food Type

(1) Leached tea (infused tea)

Leached tea refers to indulgence foods that are produced using sprouts, leaves, flowers, stems, roots or fruits, etc. of plants as well as grains, etc., as main ingredients and that are intended to be drunk the filtrate after leached in water.

(2) Liquid tea

Liquid tea refers to indulgence foods (in extract, concentrate, or powder form) that are produced by processing ingredients of plant origin as main ingredients,

such as by extraction or other methods; or those in syrup or liquid form made by adding food or food additives to such foods.

(3) Solid tea

Solid tea means indulgence foods in solid form, such as powder, etc., that are processed from ingredients of plant origin as main ingredients.

5) Specifications

(1) Tar colors: Shall not be detected

(2) Lead (mg/kg) : Not more than 5.0 for Leached tea; not more than 0.3 for Liquid teas; not more than 2.0 for Solid teas.

(3) Cadmium (mg/kg): Not more than 0.1 (only applicable to Liquid tea)

(4) Tin (mg/kg): Not more than 150 (only applicable to liquid products in non-aluminum cans)

(5) Bacterial count: n=5, c=1, m=100, M=1,000 (only applicable to liquid products)

(6) Coliforms: n=5, c=1, m=0, M=10 (only applicable to liquid products).

6) Test Methods

(1) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(2) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(3) Cadmium

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(4) Tin

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(5) Bacterial Count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(6) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

9-2 Coffee

1) Definition

Coffee refers to coffee beans processed with/without the addition of food or food additives; it includes roasted coffee (coffee beans roasted or ground after roasting), instant coffee (dried soluble extracts of roasted coffee), coffee mix, coffee drinks (including a mixture of coffee and milk products containing not less than 0.5% coffee solids, which is intended for drinking).

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Water, ethyl alcohol or carbon dioxide shall be used as solvents for extracting coffee beans.

4) Food Type

5) Specifications

(1) Lead (mg/kg)： Not more than 2.0

(2) Tin (mg/kg)： Not more than 150 (only applicable to liquid products in non-aluminum cans)

(3) Tar colors： Shall not be detected

(4) Bacterial count： n=5, c=1, m=100, M=1,000 (only applicable to liquid products)

(5) Coliforms： n=5, c=1, m=0, M=10 (only applicable to liquid products).

6) Test Methods

(1) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(2) Tin

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(3) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(4) Bacterial Count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

9-3 Fruit/Vegetable Beverages

1) Definition

Fruit/Vegetable beverages refers to products processed from fruits or vegetables as main ingredients to be drunk directly or after dilution; it includes concentrated fruit/vegetable juice, fruit/vegetable juice, and fruit/vegetable drink.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Fruits and vegetables shall be sufficiently washed with water.

4) Food Type

(1) Concentrated fruit/vegetable juice (or fruit/vegetable powder)

It refers to fruit juice; vegetable juice; or a mixture of fruit and vegetable juice concentrated to be not more than 50%; or made it into powder (except those used as ingredients)

(2) Fruit/Vegetable juice

It refers to fruit/vegetable juice obtained by physical processing of fruits or vegetables, such as pressing, grinding, juice extracting, etc. (including concentrated fruit/vegetable juice; fruit/vegetable juice; or fruit powder; vegetable powder; fruit/vegetable juice reconstituted from fruit/vegetable powder; fruit/vegetable puree/paste); or such juice added with food or food additives (containing not less than 95% fruit/vegetable juice).

(3) Fruit/Vegetable drink

It refers to a product produced by processing concentrated fruit/vegetable juice (or fruit/vegetable powder) or fruit/vegetable juice, etc. as a main ingredient (containing not less than 10% of fruit juice, vegetable juice or fruit/vegetable juice).

5) Specifications

(1) Lead (mg/kg)： Not more than 0.05

(2) Cadmium (mg/kg)： Not more than 0.1

(3) Tin (mg/kg)： Not more than 150 (only applicable to products in non-aluminum cans)

(4) Bacterial count： n=5, c=1, m=100, M=1,000 (however, for non-heated

products or those containing non-heated ingredients, n=5, c=1, m=100,000, M=500,000 or less)

(5) Coliforms : n=5, c=1, m=0, M=10 (excluding non-heated products and those containing non-heated ingredients)

(6) *Escherichia coli* : n=5, c=1, m=0, M=10 (only applicable to non-heated products and those containing non-heated ingredients)

(7) Preservatives (g/kg) : No preservatives shall be detected except for the following:

Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 0.6 (as benzoic acid. However, in the case of concentrated fruit juice, the sum of benzoic acid and sorbic acid shall not be more than 1.0g/kg when used in combination with sorbic acid, potassium sorbate and calcium sorbate; and benzoic acid shall not be more than 0.6g/kg. Also, they shall not be detected in non-heated products.)
Sorbic acid Potassium sorbate Calcium sorbate	Not more than 1.0 (as sorbic acid; only applicable to concentrated fruit juice; the sum of sorbic acid and benzoic acid shall not be more than 1.0g/kg when used in combination with benzoic acid, sodium benzoate, potassium benzoate and calcium benzoate; and benzoic acid shall not be more than 0.6g/kg.)

6) Test Methods

(1) Lead and Cadmium

① Preparation of test solution

When applying the sulfuric acid-nitric acid method in accordance with “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals, 10.1.2.1 A. Application Scope of Test Methods,” take 100g of sample (for products intended to be diluted before consumption, take the amount obtained by dividing 100g by the dilution factor for consumption; and for concentrated fruit juice, by the concentration factor); and follow “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals, 10.1.2.1 B. Preparation of Test Solution.”

② Test operation

Test the sample according to “Chapter 7. General Test Methods, 7.1 Tests for Heavy Metals, 10.1.2.1 C. Measurement.”

(2) Tin

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for

Heavy Metals.”

(3) Bacterial count

Take a sample as packaged in a container, wash the surface with water and allow to air dry. Then, wipe the cap and its bottom up to the scale of 5~10 with a cotton ball soaked with 70% alcohol, flame-sterilize and cool it down in a sterile box. Open, unseal or release with a sterile tool; immediately transfer the content into another sterile container; and stir it thoroughly to mix. Using it as a test solution, test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

In the case of carbonated soft drinks, transfer the content into another sterile container, stir it thoroughly to mix for approximately 5 minutes to remove carbon dioxide and use it as a test solution.

(4) Coliforms

Using the above test solution prepared for (3) Bacterial Count, test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(5) *Escherichia coli*

Using the above test solution prepared for (3) Bacterial Count, test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(6) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 2.1 Preservatives.”

9-4 Carbonated Beverages

1) Definition

Carbonated beverages refers to a carbonated beverage and carbonated water containing carbon dioxide.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Carbonated beverage

It refers to a mixture of drinking water, food or food additives and carbon dioxide; or carbonated water added with food or food additives.

(2) Carbonated water

It refers to water naturally containing carbon dioxide; or drinking water added with carbon dioxide.

5) Specifications

(1) Carbon dioxide pressure (kg/cm2)

① Carbonated water: Not less than 1.0

② Carbonated beverages: Not less than 0.5

(2) Lead (mg/kg)： Not more than 0.3

(3) Cadmium (mg/kg)： Not more than 0.1

(4) Tin (mg/kg)： Not more than 150 (only applicable to products in non-aluminum cans)

(5) Bacterial count：n=5, c=1, m=100, M=1,000

(6) Coliforms：n=5, c=1, m=0, M=10

(7) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 0.6 (as benzoic acid; but they shall not be detected in carbonated water)

(1) Gas pressure

Test the sample according to “Chapter 7. General Test Methods, 6.4.1.1 Gas

Pressure.”

(2) Lead and Cadmium

Test the sample according to “Chapter 9-3. Fruit/Vegetable Drinks, 6) Test Methods, (1) Lead and Cadmium.”

(3) Tin

Test the sample according to “Chapter 9-3. Fruit/Vegetable Drinks, 6) Test Methods, (3) Tin.”

(4) Bacterial count

Test the sample according to “Chapter 9-3. Fruit/Vegetable Drinks, 6) Test Methods, (4) General Bacterial Count.”

(5) Coliforms

Test the sample according to “Chapter 9-3. Fruit/Vegetable Drinks, 6) Test Methods, (5) Coliforms.”

(6) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

9-5 Soy Milks

1) Definition

Soy milks refers to extracts of pulses or processed pulse products; or products manufactured/processed by adding other food or food additives to such extracts; and it includes undiluted and processed soy milk.

2) Requirements for Ingredients, etc.

(1) Pulses shall be subjected to pre-treatment process to thoroughly remove impurities, soil, sand and straw, etc.

3) Manufacturing/Processing Standards

(1) When used directly, pulses shall be sufficiently heated to inactivate quality-deteriorating agents.

(2) Finished products shall be subjected to pasteurization or sterilization process, and pasteurized products shall be cooled down to 10°C or below after pasteurization (except pasteurized products with a pH value of not more than 4.6).

(3) Powder products shall contain pulse solids of not less than 50%.

4) Food Type

(1) Undiluted soy milk

It refers to a milk extracted from pulses (pulse solids of not less than 7%) or its powdered form.

(2) Processed soy milk

It refers to a beverage produced by adding fruit/vegetable juice (including fruit purees) or food or food additives (pulse solids of not less than 1.4%), such as milk, milk products, or grain powder, etc., to undiluted soy milk or extract of processed pulse products; or making it into a powder product (pulse solids of not less than 7%)

5) Specifications

(1) Bacterial count: n=5, c=2, m=10,000, M=50,000 (n=5, c=0, m=0 in sterilized products)

(2) Coliforms: n=5, c=2, m=0, M=10 (excluding sterilized products)

6) Test Methods

(1) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5. General Bacterial Count.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

9-6 Fermented Beverages

1) Definition

Fermented beverages refers to products produced by fermenting milk products or ingredients of plant origin with microorganisms, such as lactic acid bacteria or yeast, etc. and processing them; except those applicable to fermented milks.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Lactic acid bacteria beverage

Lactic acid bacteria beverage refers to products produced by fermenting milk products or ingredients of plant origin with lactic acid bacteria and processing (including pasteurization) them.

(2) Yeast beverage

Yeast beverage refers to products produced by fermenting milk products or ingredients of plant origin with yeast and processing (including pasteurization) them.

(3) Other fermented beverage

Other fermented beverages refers to products produced by fermenting milk products or ingredients of plant origin with microorganisms, etc. and processing (including pasteurization) them.

5) Specifications

(1) Lactic acid bacteria or yeasts count: Not less than 1,000,000/1 mL (only applicable to Lactic acid bacteria and Yeast beverages; excluding pasteurized products)

(2) Bacterial count: n=5, c=1, m=100, M=1,000 (only applicable to pasteurized products)

(3) Coliforms: n=5, c=1, m=0, M=10

(4) Preservatives (g/kg): No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 0.05 (as sorbic acid; however, they shall not be detected in pasteurized products.)

6) Test Methods

(1) Lactic acid bacteria or yeast count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count, or 4.10 The Number of Fungi (The Number of Yeasts and Molds).”

(2) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.

9-7 Ginseng/Red Ginseng Beverages

1) Definition

Ginseng/Red ginseng beverages refers to products produced by adding food or food additives, etc. to ginseng, red ginseng or soluble ginseng/red ginseng components for direct consumption purposes.

2) Requirements for Ingredients, etc.

(1) Fresh ginseng to be added in its original form to ginseng/red ginseng beverages shall not be less than 3 years old; and diseased ginseng or lower grade ginseng may not be used.

(2) Dried young ginseng (*chunmisam),* ginseng seedling *(myosam),* skin *(sampi)* and ginseng marc shall not be used; and diseased ginseng maybe used after removal of the damaged parts.

3) Manufacturing/Processing Standards

(1) When manufacturing Ginseng/Red ginseng beverages, any suspended solids derived from ginseng/red ginseng shall be removed.

(2) It shall contain not less than 0.15% of soluble ginseng/red ginseng components; or not less than 1 root of 3-year-old or older ginseng or red ginseng (based on 80 mg/g ginseng saponin; and 70mg/g red ginseng saponin, respectively).

4) Food Type

5) Specifications

(1) Ginseng/red ginseng components: Shall be verified

(2) Tar colors ： Shall not be detected

(3) Lead (mg/kg)： Not more than 0.3

(4) Tin (mg/kg)： Not more than 150 (only applicable to products in non-aluminum cans)

(5) Bacterial count： n=5, c=1, m=100, M=1,000

(6) Coliforms： n=5, c=1, m=0, M=10

(7) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 0.6 (as benzoic acid)
Methyl ρ-Hydroxybenzoate; Ethyl ρ-Hydroxybenzoate	Not more than 0.1 (as parahydroxybenzoic acid)

6) Test Methods

(1) Ginseng/red ginseng components

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.4.2.1 Ginseng/Red Ginseng Components.”

(2) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(3) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(4) Tin

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(5) Bacterial Count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(6) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

9-8 Other Beverages

1) Definition

Other beverages refers to products intended for drinking produced by adding food or food additives to drinking water, or those processed using ingredients of animal/plant origin; which are not categorized as any other beverage type.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Mixed beverage

Mixed beverage refers to products produced by adding food or food additives to drinking water or ingredients of animal/plant origin; and processed to drink.

(2) Beverage base

Beverage base refers to products produced by using ingredients of animal/plant origin; or adding food or food additives to such ingredients; which are intended for drinking after dilution with drinking water, etc.

5) Specifications

(1) Oxygen content (mg/L): Not less than 24 (only applicable to products artificially filled with oxygen)

(2) Lead (mg/kg) : Not more than 0.3

(3) Cadmium (mg/kg) : Not more than 0.1

(4) Tin (mg/kg) : Not more than 150 (only applicable to products in non-aluminum cans)

(5) Bacterial count : n=5, c=1, m=100, M=1,000 (except powder products and products containing lactic acid bacteria)

(6) Coliforms : n=5, c=1, m=0, M=10

(7) Lactic acid bacteria count: Not less than the indicated amount (however, only applicable to products containing lactic acid bacteria)

(8) Preservatives (g/kg) : No preservatives shall be detected except for the following:

Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 0.6 (as benzoic acid; when used in combination with ethyl ρ-hydroxybenzoate or methyl ρ-hydroxybenzoate, the sum of benzoic acid and parahydroxybenzoic acid shall not be more than 0.6 g/kg; and the use of parahydroxybenzoic acid shall not be more than 0.1 g/kg; also, they shall not be detected in powder products.
Methyl ρ-Hydroxybenzoate; Ethyl ρ-Hydroxybenzoate	Not more than 0.1 (as parahydroxybenzoic acid; when used in combination with benzoic acid, sodium benzoate, potassium benzoate and calcium benzoate, the sum of parahydroxybenzoic acid and benzoic acid shall not be more than 0.6 g/kg; and parahydroxybenzoic acid shall not be more than 0.1 g/kg; also, they shall not be detected in powder products.)

6) Test Methods

(1) Oxygen content

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.4.3.1 Oxygen Content.”

(2) Lead and Cadmium

Test the sample according to “9-1. Fruit/Vegetable Beverages, 6) Test Methods, (1) Lead and Cadmium, etc.”

(3) Tin

Test the sample according to “9-1. Fruit/Vegetable Beverages, 6) Test Methods, (3) Tin.”

(4) Bacterial Count

Take a sample as packaged in a container, wash the surface with water and allow to air dry. Then, wipe the cap and nearby parts with a cotton ball soaked with 70% alcohol. Open, unseal or release with a sterile tool; immediately transfer the content into another sterile container; and stir it thoroughly to mix. Using it as a test solution, test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

In the case of carbonated soft drinks, transfer the content into another sterile container, stir it thoroughly to mix to remove carbon dioxide and use it as a

test solution.

(5) Coliforms

Using the above test solution prepared for (3) Bacterial count, test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) Lactic acid bacteria count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count.”

(7) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

10. Foods for Special Dietary Uses

Foods for special dietary uses refers to products manufactured/processed, such as by mixing foods and nutrients, etc., intended for certain people requiring special nutritional care, such as infants/young children, patients, the elderly, obese people or pregnant/lactating women, etc. Such foods include: milk formulas; infant formula; follow-up formula; cereal formula for infants/young children; other foods for infants/young children; foods for special medical purposes; weight control formula; and foods for pregnant/lactating women.

10-1 Milk Formulas

1) Definition

Milk formulas refers to products processed to have a composition similar to breast milk by using raw milk or milk products as a main ingredient and adding nutrients required for growth of infants/young children, such as minerals and vitamins, etc., thereto.

2) Requirements for Ingredients, etc.

(1) Raw ingredients shall not be irradiated.

3) Manufacturing/Processing Standards

(1) When adding vitamins that are easily destroyed by heat, or minerals that are not easily dissolved to a solution before pasteurization, such nutrients shall be added in a proper way, taking into account the destruction rate of vitamins and solubility of minerals, respectively.

(2) Vitamins, minerals and nutrients, etc. to be added shall be uniformly mixed in the products.

(3) Powder products shall be packaged/filled with nitrogen, carbon dioxide or a mixture of nitrogen and carbon dioxide; liquid products shall be sterilized and aseptic packaged.

(4) In order to add nutrients contained in breast milk, or to make it suitable as a sole nutritional source for infants/young children, other nutrients may be added as necessary; provided, however, that usefulness of such nutrients shall be

scientifically proven, and the amount shall be added based on breast milk.

4) Food Type

(1) Infant milk formula

It refers to a product in powder (containing not less than 60.0% milk component) or liquid form (not less than 9.0% milk component) for direct consumption, which is manufactured/processed to have a composition similar to breast milk to be used as a substitute for breast milk in cases of difficulty in breastfeeding.

(2) Follow-up milk formula

It means a product in powder (containing not less than 60.0% milk component) or liquid form (not less than 9.0% milk component), which is processed for infants/young children of 6 months of age or older.

5) Specifications

Items \ Type	Infant milk formula		Follow-up milk formula
		Maximum recommended standard	
(1) Calorie (kcal/100 mL)	60~70		60~85
(2) Water (%)	Not more than 5.0 (except liquid products)		Not more than 5.0 (except liquid products)
(3) Crude protein (g/100 kcal)	1.8～3.0		2.4～5.5
(4) Crude fat (g/100 kcal)	4.4～6.0		3.0～6.0
(5) Linoleic acid (mg/100 kcal)	Not less than 300	1400	Not less than 300
(6) α-linolenic acid (mg/100 kcal)	Not less than 50		-
(7) Ratio of linoleic acid to α-linolenic acid	5:1～15:1		-
(8) Carbohydrate (g/100 kcal)	9.0～14.0		-
(9) Milk component (g/100 kcal)	Not less than 12.0		Not less than 12.0
(10) Vitamin A (μg/100 kcal or IU/100 kcal)	60～180 or 200～600		75～225 or 250～750

Items \ Type	Infant milk formula		Follow-up milk formula
		Maximum recommended standard	
(11) Vitamin D (μg/100 kcal or IU/100 kcal)	1.0～2.5 or 40～100		1.0～3.0 or 40～120
(12) Vitamin C (mg/100 kcal)	Not less than 10.0	30 (except, 70 for liquid products)	Not less than 8.0
(13) Vitamin B_1 (μg/100 kcal)	Not less than 60	300	Not less than 40
(14) Vitamin B_2 (μg/100 kcal)	Not less than 80	500	Not less than 60
(15) Niacin (μg/100 kcal)	Not less than 300	1500	Not less than 250
(16) Vitamin B_6 (μg/100 kcal)	Not less than 35	175	Not less than 45 (However, if the amount of protein is 3.0 g or more, vitamin B_6 shall increase at least by 15 μg per additional gram of protein.)
	(However, if the amount of protein is 2.3 g or more, vitamin B_6 shall increase at least by 15 μg per additional gram of protein.)		
(17) Folic acid (μg/100 kcal)	Not less than 10.0	50	Not less than 4.0
(18) Pantothenic acid (μg/100 kcal)	Not less than 400	2000	Not less than 300
(19) Vitamin B_{12} (μg/100 kcal)	Not less than 0.1	1.5	Not less than 0.15
(20) Vitamin K_1 (μg/100 kcal)	Not less than 4.0	27	Not less than 4.0
(21) Biotin (μg/100 kcal)	Not less than 1.5	10	Not less than 1.5
(22) Vitamin E (mg α-TE/100 kcal or IU/100 kcal)	Not less than 0.5 or Not less than 0.7	5.0 or 7.0	Not less than 0.5 or not less than 0.7 (However, if the amount of linoleic acid is 1g or more, vitamin E shall increase at least by 0.5 mg α-TE or 0.7 IU per additional gram of linoleic acid.)
	(However, if the amount of linoleic acid is 1g or more, vitamin E shall increase at least by 0.5 mg α-TE or 0.7 IU per additional gram of linoleic acid.)		
(23) Sodium (mg/100 kcal)	20～60		20 ～ 85
(24) Potassium (mg/100 kcal)	60 ~ 180		Not less than 80

Items \ Type	Infant milk formula	Maximum recommended standard	Follow-up milk formula
(25) Chlorine (mg/100 kcal)	50 ~ 160		Not less than 55
(26) Calcium (mg/100 kcal)	Not less than 50	140	Not less than 90
(27) Phosphorus (mg/100 kcal)	Not less than 25	100	Not less than 60 (However, the ratio of calcium to phosphorus shall be 1:1~2:1)
	(However, the ratio of calcium to phosphorus shall be 1:1~2:1)		
(28) Magnesium (mg/100 kcal)	Not less than 5.0	15	Not less than 6.0
(29) Iron (mg/100 kcal)	Not less than 0.45 (Not less than 1.0 for iron fortified products)		1.0～2.0
(30) Iodine (μg/100 kcal)	Not less than 10.0	60	Not less than 5.0
(31) Copper (μg/100 kcal)	Not less than 35	120	-
(32) Zinc (mg/100 kcal)	Not less than 0.5	1.5	Not less than 0.5
(33) Manganese (μg/100 kcal)	Not less than 1.0	100	Not less than 5.0
(34) Selenium (μg/100 kcal)	1.0 ~ 9.0		Not less than 9.0
(35) Sodium saccharin	Shall not be detected		
(36) Tar colors	Shall not be detected		
(37) Bacterial count	n=5, c=2, m=1,000, M=10,000 (n=5, c=0, m=0 for sterilized products; except products containing lactic acid bacteria)		
(38) Coliforms	n=5, c=1, m=<3, M=10 (except sterilized products)		
(39) *Cronobacter* spp.	n=5, c=0, m=0/60 g (except sterilized products)		-
(40) Carbide (scorched particle)	Not more than 7.5 mg/100 g		
(41) *Bacillus cereus*	n=5, c=0, m=100 (except sterilized products)		
(42) *Salmonella* spp.	n=5, c=0, m=0/25g		
(43) *Listeria monocytogenes*	n=5, c=0, m=0/25g		

Items \ Type	Infant milk formula		Follow-up milk formula
		Maximum recommended standard	
(44) *Staphylococcus aureus*	n=5, c=0, m=0/25g		
(45) *Clostridium perfringens*	n=5, c=0, m=0/25g		

※ Vitamin A_1 μg=3.33 IU; Vitamin D_1 μg=40 IU; Vitamin E_1 mg=1.49 IU; 1 mg α-TE (alpha-tocopherolequivalent)=1 mg d-α-tocopherol.

Note) In order to apply the component specifications to liquid products, specifications for each component shall be converted based on the water specifications for powder products (5.0%).

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

10-2 Infant Formulas

1) Definition

Infant formulas refers to products manufactured/processed into powder or liquid form to be used as a substitute in cases of difficulty in breastfeeding or formula-feeding, by using soy protein isolates or the proteins isolated from other foods as protein sources and adding other foods and nutrients, such as minerals, vitamins, etc., to such protein sources to make them fit for normal growth/development of infants; except for milk formulas.

2) Requirements for Ingredients, etc.

(1) Soy protein isolates or proteins, isolated from other foods to be used as an ingredient, shall be treated to be fit for infant consumption; provided, however, that gluten may not be used as a protein source.

(2) Raw ingredients shall not be irradiated.

(3) Cocoa may not be used as an ingredient.

(4) Dry ingredients shall be dried to low-moisture level before storage in order to prevent microbial growth; other ingredients shall be stored according to their properties by installing equipment to control temperature and humidity.

3) Manufacturing/Processing Standards

(1) They shall be pasteurized or sterilized in order to prevent microbial risks.

(2) Powder products shall be packaged/filled with nitrogen, carbon dioxide or a mixture of nitrogen and carbon dioxide; liquid products shall be sterilized and aseptic packaged.

(3) In order to add nutrients contained in breast milk, or to make it suitable as a sole nutritional source for infants/young children, other nutrients may be added as necessary; provided, however, that usefulness of the applicable nutrients shall be scientifically proven, and the amount shall be added based on breast milk.

(4) The amino acid score of the protein in finished products shall not be less than 85.

* The Standard Essential Amino Acid Composition Table for Calculation of Amino Acid Scores

(Unit: mg/g Crude Protein)

Classification	Histidine	Isoleucine	Leucine	Lysine	Methionine +Cystine	Phenylalanine +Tyrosine	Threonine	Tryptophane	Valine	Total
Amino acid composition	19	28	66	58	25	63	34	11	35	339

(5) For liquid products intended for direct consumption, solids shall be based on 10~15%; and for those intended for consumption after dilution, solids concentration may vary.

(6) Tin tubes may not be used as containers of liquid or paste products.

(7) When used as an ingredient, honey or maple syrup shall be treated in a way that destroys the spores of *Clostridium botulinum*.

(8) In order to prevent contamination by microorganisms or other sources, the spray drying equipment used in manufacturing powdered foods for infants/young children shall be periodically cleaned.

(9) Prior to packaging, efficient methods shall be used to prevent adulteration by foreign matters or metals, such as using sieves, traps, magnets, or electric metal detectors, etc.

4) Food Type

5) Specifications

(1) Water (%): Not more than 5.0 (only applicable to powder products)

(2) Calorie (kcal/100 ml): 60~70

(3) Crude protein (g/100 kcal): 1.8~4.0

(4) Crude fat (g/100 kcal): 4.4~6.0

(5) Linoleic acid (mg/100 kcal): Not less than 300

(6) α- Linolenic acid (mg/100 kcal): Not less than 50

(7) Ratio of Linoleic acid to α- Linolenic acid: 5:1～15:1

(8) Carbohydrate (g/100 kcal): 9.0~14.0

(9) Vitamin A (μgRE/100 kcal or IU/100 kcal): 75~150 or 250~500

(10) Vitamin D (μg/100 kcal or IU/100 kcal): 1.0~2.5 or 40~100

(11) Vitamin C (mg/100 kcal): Not less than 8

(12) Vitamin B_1 (μg/100kcal): Notlessthan40

(13) Vitamin B_2 (μg/100kcal: Notlessthan60

(14) Niacin (μg/100 kcal): Not less than 250

(15) Vitamin B_6 (μg/100kcal): Not less than 35 (However, if the amount of protein is 2.3 g or more, vitamin B_6 shall increase at least by 15 μg per additional gram of protein.)

(16) Folic acid (μg/100 kcal): Not less than 4.0

(17) Pantothenic acid (μg/100 kcal): Not less than 300

(18) Vitamin B_{12} (μg/100kcal):Notlessthan0.1

(19) Vitamin K_1 (μg/100kcal):Notlessthan4.0

(20) Biotin (μg/100 kcal): Not less than 1.5

(21) Choline (mg/100 kcal): Not less than 7.0

(22) Vitamin E (mg α-TE/100 kcal or IU/100 kcal): Not less than 0.5 or not less than 0.7 (However, vitamin E shall increase at least by 0.5 mg α -TE or 0.7 IU per additional gram of linoleic acid.)

(23) Sodium (mg/100 kcal): 20~60

(24) Potassium (mg/100 kcal): 80~200

(25) Chlorine (mg/100 kcal): 55~150

(26) Calcium (mg/100 kcal): Not less than 50

(27) Phosphorus (mg/100 kcal): Not less than 25 (However, the ratio of calcium to phosphorus shall be 1.2:1~2:1.)

(28) Magnesium (mg/100 kcal): Not less than 6.0

(29) Iron (mg/100 kcal): Not less than 1.0

(30) Iodine (μg/100 kcal): Not less than 5.0

(31) Copper (μg/100 kcal): Not less than 60

(32) Zinc (mg/100 kcal): Not less than 0.75

(33) Manganese (μg/100 kcal): Not less than 5.0

(34) Selenium (μg/100 kcal): Not more than 9.0

(35) Sodium saccharin: Shall not be detected

(36) Tar colors: Shall not be detected

(37) Bacterial count: n=5, c=2, m=1,000, M=10,000 (n=5, c=0, m=0 for sterilized products; except products containing lactic acid bacteria)

(38) Coliforms: n=5, c=0, m=0 (except for sterilized products)

(39) *Cronobacter* spp.: n=5, c=0, m=0/60g (except for sterilized products)

(40) *Bacillus cereus*: n=5, c=0, m=100 (except for sterilized products)

(41) Carbide : not more than 7.5 mg/100 g [Compare with the standard Disk A set forth by the American Dairy Product Institute(ADPI)] (however, only applicable to powder products).

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Calorie

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.6 Calculation of Calories.”

(3) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(4) Crude fat

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.1 Crude Fat.”

(5) Linoleic acid

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(6) α- Linolenic acid

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(7) The Ratio of linoleic acid to α- linolenic acid

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(8) Carbohydrate

Test the sample according to “Chapter 7. General Test Methods, 2.1 General Component Test Methods.”

(9) Vitamin A

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.1 Vitamin A.”

(10) Vitamin D

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.7 Vitamin D.”

(11) Vitamin C

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.4 Vitamin C.”

(12) Vitamin B_1

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.2 Vitamin B_1.”

(13) Vitamin B_2

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.3 Vitamin B_2.”

(14) Niacin

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.5 Niacin.”

(15) Vitamin B_6

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.9 Vitamin B6 (Pyridoxine); or 2.2.2.12.2 Vitamin B_6.”

(16) Folic acid

Test the sample according to “Chapter 7. General Test Methods, 2.2

Micronutrient Test Methods, 2.2.2.12.3 Folic Acid."

(17) Pantothenic acid

Test the sample according to "Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.10 Pantothenic Acid; or 2.2.2.12.4 Pantothenic Acid."

(18) Vitamin B_{12}

Test the sample according to "Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.11 Vitamin B_{12}; or 2.2.2.12.5 Vitamin B_{12}."

(19) Vitamin K_1

Test the sample according to "Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.8 Vitamin K_1."

(20) Biotin

Test the sample according to "Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.7 Biotin."

(21) Choline

Test the sample according to "Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.6 Choline."

(22) Vitamin E

Test the sample according to "Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.6 Vitamin E."

(23) Sodium

Test the sample according to "Chapter 7. General Test Methods, 1.2 Micronutrient Test Methods, 1.2.1.6 Sodium."

(24) Potassium

Test the sample according to "Chapter 7. General Test Methods, 1.2 Micronutrient Test Methods, 1.2.1.7 Potassium."

(25) Chlorine

Test the sample according to "Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Mineral Components, 2.2.1.14 Chlorine."

(26) Calcium

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.2 Calcium.”

(27) Phosphorus

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.3 Phosphorus.”

(28) Magnesium

Test the sample according to “Chapter 7. General Test Methods, 2.2.1.15 Magnesium.”

(29) Iron

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.4 Iron.”

(30) Iodine

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.9 Iodine.”

(31) Copper

Prepare a test solution according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals, 10.1.2.1 B. Preparation of Test Solution, 2) Dry Ashing Method,” and test the sample according to “10.1.2.1 C. Measurement, 1) Atomic Absorption Spectrophotometry; or 2) Inductively Coupled Plasma.”

(32) Zinc

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.8 Zinc.”

(33) Manganese

Prepare a test solution according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals, 10.1.2.1 B. Preparation of Test Solution, 2) Dry Ashing Method,” and test the sample according to “10.1.2.1 C. Measurement, 1) Atomic Absorption Spectrophotometry; or 2) Inductively Coupled Plasma.”

(34) Selenium

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.10. Selenium.”

(35) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium saccharin.”

(36) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(37) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(38) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(39) *Cronobacter* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp.”

(40) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(41) Carbide

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matter Test Methods, 1.2.2 Foreign Matters for Each Food Product, C. Test Operation, F) Ice Cream Powder, Evaporated Milk, Sweetened Condensed Milk, Sweetened Condensed Skim Milk, Whole Milk Powder, Nonfat Dry Milk, Sweetened Milk Powder & Modified Milk Powder, and Formula.”

10-3 Follow-up Formulas

1) Definition

Follow-up formulas refers to products manufactured/processed into powder or liquid form to be used as liquid for consumption of baby food by adding nutrients—such as minerals, vitamins, etc., required for normal growth/development of infants and young children of 6 months or older—to protein-containing foods, such as soy protein isolates, etc., used as ingredients; except for milk formulas.

2) Requirements for Ingredients, etc.

(1) Raw ingredients shall not be irradiated.

(2) Dry ingredients shall be dried to low-moisture level before storage in order to prevent microbial growth; other ingredients shall be stored according to their properties by installing equipment to control temperature and humidity.

3) Manufacturing/Processing Standards

(1) They shall be pasteurized or sterilized in order to prevent microbial risks.

(2) Powder products shall be packaged/filled with nitrogen, carbon dioxide or a mixture of nitrogen and carbon dioxide; liquid products shall be sterilized and aseptic packaged.

(3) In order to add nutrients contained in breast milk, or to make it suitable as a sole nutritional source for infants/young children, other nutrients may be added as necessary; provided, however, that usefulness of the applicable nutrients shall be scientifically proven, and the amount shall be added based on breast milk.

(4) The amino acid score of the protein in finished products shall not be less than 85.

* The Standard Essential Amino Acid Composition Table for Calculation of Amino Acid Scores shall follow the table in 10-2 3) (4).

(5) For liquid products intended for direct consumption, solids shall be based on 10~15%; and for those intended for consumption after dilution, solids concentration may vary.

(6) Tin tubes may not be used as containers of liquid and paste products.

(7) When used as an ingredient, honey or maple syrup shall be treated in a way that destroys the spores of *Clostridium botulinum*.

(8) Cocoa may be used for young children of 12 months or older; and the amount of use shall not be more than 1.5% based on the product consumed after dilution.

(9) In order to prevent contamination by microorganisms or other sources, the spray drying equipment used in manufacturing powdered foods for infants/young children shall be periodically cleaned.

(10) Prior to packaging, efficient methods shall be used to prevent adulteration by foreign matters or metals, such as using sieves, traps, magnets, or electric metal detectors, etc.

4) Food Type

5) Specifications

(1) Water (%): Not more than 5.0 (only applicable to powder products)

(2) Calorie (kcal/100 ml): 60~85

(3) Crude protein (g/100kcal): 3.0~5.5

(4) Crude fat (g/100kcal): 3.0~6.0

(5) Linoleic acid (mg/100kcal) : Not less than 300

(6) Vitamin A (μgRE/100 kcal or IU/100 kcal): 75~225 or 250~750

(7) Vitamin D (μgRE/100 kcal or IU/100 kcal): 1.0~3.0 or 40~120

(8) Vitamin C (mg/100kcal): Not less than 8

(9) Vitamin B_1 (μg/100kcal): Not less than 40

(10) Vitamin B_2 (μg/100kcal): Notless than 60

(11) Niacin (μg/100kcal): Not less than 250

(12) Vitamin B_6 (μg/100kcal): Not less than 45 (However, if the amount of protein is 3.0 g or more, vitamin B_6 shall increase at least by 15 μg per additional gram of protein.)

(13) Folic acid (μg/100kcal): Not less than 4.0

(14) Pantothenic acid (μg/100kcal): Not less than 300

(15) Vitamin B_{12} (μg/100kcal): Not less than 0.15

(16) Vitamin K_1 (μg/100kcal): Not less than 4.0

(17) Biotin (μg/100kcal): Not less than 1.5

(18) Vitamin E (mg α-TE/100 kcal or IU/100 kcal): Not less than 0.5 or not less than 0.7 (However, vitamin E shall increase at least by 0.5 mg α -TE or 0.7 IU per additional gram of linoleic acid.)

(19) Sodium (mg/100kcal): 20~85

(20) Potassium (mg/100kcal): Not less than 80

(21) Chlorine (mg/100kcal): Not less than 55

(22) Calcium (mg/100kcal): Not less than 90

(23) Phosphorus (mg/100kcal): Not less than 60 (However, the ratio of calcium to phosphorus shall be 1.2:1~2:1.)

(24) Magnesium (mg/100kcal): Not less than 6.0

(25) Iron (mg/100kcal): Not less than 1.0

(26) Iodine (μg/100kcal): Notlessthan5.0

(27) Zinc (mg/100kcal): Not less than 0.5

(28) Selenium (μg/100kcal): Not more than 9.0

(29) Sodium saccharin : Shall not be detected

(30) Tar colors: Shall not be detected

(31) Bacterial count: n=5, c=2, m=1,000, M=10,000 (n=5, c=0, m=0 for sterilized products; except products containing lactic acid bacteria)

(32) Coliforms: n=5, c=0, m=0 (except for sterilized products)

(33) *Bacillus cereus*: n=5, c=0, m=100 (except for sterilized products)

(34) Carbide: not more than 7.5 mg/100 g [Compare with the standard Disk A set forth by the American Dairy Products Institute (ADPI)] (however, only applicable to powder products).

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food

Component Test Methods, 2.1.1 Water.”

(2) Calorie

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.6 Calculation of Calories.”

(3) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(4) Crude fat

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.1 Crude Fat.”

(5) Linoleic acid

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(6) Vitamin A

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.1 Vitamin A.”

(7) Vitamin D

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.7 Vitamin D.”

(8) Vitamin C

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.4 Vitamin C.”

(9) Vitamin B_1

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.2 Vitamin B_1.”

(10) Vitamin B_2

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.3 Vitamin B_2.”

(11) Niacin

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.5 Niacin.”

(12) Vitamin B_6

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.9 Vitamin B_6 (Pyridoxine); or 2.2.2.12.2 Vitamin B_6.”

(13) Folic acid

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.3 Folic Acid.”

(14) Pantothenic acid

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.10 Pantothenic Acid; or 2.2.2.12.4 Pantothenic Acid.”

(15) Vitamin B_{12}

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.11 Vitamin B_{12}; or 2.2.2.12.5 Vitamin B_{12}.”

(16) Vitamin K_1

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.8 Vitamin K_1.”

(17) Biotin

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.7 Biotin.”

(18) Vitamin E

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.6 Vitamin E.”

(19) Sodium

Test the sample according to “Chapter 7. General Test Methods, 1.2 Micronutrient Test Methods, 1.2.1.6 Sodium.”

(20) Potassium

Test the sample according to “Chapter 7. General Test Methods, 1.2

Micronutrient Test Methods, 1.2.1.7 Potassium.”

(21) Chlorine

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Mineral Components, 2.2.1.14 Chlorine.”

(22) Calcium

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.2 Calcium.”

(23) Phosphorus

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.3 Phosphorus.”

(24) Magnesium

Test the sample according to “Chapter 7. General Test Methods, 2.2.1.15 Magnesium.”

(25) Iron

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.4 Iron.”

(26) Iodine

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.9 Iodine.”

(27) Zinc

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.8 Zinc.”

(28) Selenium

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.10. Selenium.”

(29) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin.”

(30) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(31) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(32) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(33) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(34) Carbide

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matter Test Methods, 1.2.2 Foreign Matters for Each Food Product, C. Test Operation, F) Ice Cream Powder, Evaporated Milk, Sweetened Condensed Milk, Sweetened Condensed Skim Milk, Whole Milk Powder, Skim Milk Powder, Sweetened Milk Powder & Modified Milk Powder, and Formula.”

10-4 Cereal Formulas for Infants/Young Children

1) Definition

Cereal formulas for infants/young children refers to products manufactured/ processed by adding foods and nutrients to starch ingredients, such as grains, pulses and tuberous and corm vegetables, etc., used as main ingredients (not less than 25% based on the solids in finished products), for weaning and nutritional supplementation for infants and young children at weaning period.

2) Requirements for Ingredients, etc.

(1) Raw ingredients shall not be irradiated.

(2) Dry ingredients shall be dried to low-moisture level before storage in order to prevent microbial growth; other ingredients shall be stored according to their properties by installing equipment to control temperature and humidity.

3) Manufacturing/Processing Standards

(1) They shall be pasteurized or sterilized in order to prevent microbial risks.

(2) Powder products shall be packaged/filled with nitrogen, carbon dioxide or a mixture of nitrogen and carbon dioxide; liquid products shall be sterilized and aseptic packaged.

(3) In order to add nutrients contained in breast milk, or to make it suitable as a sole nutritional source for infants/young children, other nutrients may be added as necessary; provided, however, that usefulness of the applicable nutrients shall be scientifically proven, and the amount shall be added based on breast milk.

(4) The amino acid score of the protein in finished products shall not be less than 85.

* The Standard Essential Amino Acid Composition Table for Calculation of Amino Acid Scores shall follow the table in 10-2 3) (4).

(5) When added to cereal formulas for infants/young children, saccharides shall not exceed 20% of total calories; and the amount of sugar shall not exceed 50% of total sugars.

(6) For liquid products intended for direct consumption, solids shall be based on 10~15%; and for those intended for consumption after dilution, solids

concentration may vary.

(7) Tin tubes may not be used as containers of liquid and paste products.

(8) When used as an ingredient, honey or maple syrup shall be treated in a way that destroys the spores of *Clostridium botulinum*.

(9) Cocoa may be used for young children of 12 months or older; and the amount of use shall not be more than 1.5% based on the product consumed after dilution.

(10) In order to prevent contamination by microorganisms or other sources, the spray drying equipment used in manufacturing powdered foods for infants/young children shall be periodically cleaned.

(11) Prior to packaging, efficient methods shall be used to prevent adulteration by foreign matters or metals, such as using sieves, traps, magnets, or electric metal detectors, etc.

4) Food Type

5) Specifications

(1) Water (%): Not more than 10.0 (only applicable to powder and solid products)

(2) Crude protein (%): Not less than 10.0 (on a dry weight basis)

(3) Crude fat (%): Not less than 5.0 (on a dry weight basis)

(4) Gelatinization degree (α): Not less than 80.0 (only applicable to powder/solid products containing 25% or more grains, pulses, tuberous and corm vegetables, etc., or their products)

(5) Sodium (mg/100kcal): Not more than 100

(6) Iron (mg/100kcal): Not less than 2.0

(7) Vitamin A (μgRE/100kcal or IU/100kcal): Not less than 60 or not less than 200

(8) Vitamin B1 (μg/100kcal): Not less than 80

(9) Vitamin B2 (μg/100kcal): Not less than 130

(10) Vitamin C (mg/100kcal): Not less than 4

(11) Sodium saccharin: Shall not be detected

(12) Tar colors: Shall not be detected

(13) Coliforms: n=5, c=0, m=0

(14) *Cronobacter* spp.: n=5, c=0, m=0/60g (Limited to Cereal Formulas for Infants and young children under 12 months)

(15) *Bacillus cereus*: n=5, c=0, m=100

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(3) Crude fat

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.1 Crude Fat.”

(4) Gelatinization degree (α)

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.5.2.1 Gelatinization Degree (α).”

(5) Sodium

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.6 Sodium.”

(6) Iron

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.4 Iron.”

(7) Vitamin A

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.1 Vitamin A.”

(8) Vitamin B_1

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.2 Vitamin B_1.”

(9) Vitamin B_2

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.3 Vitamin B_2.”

(10) Vitamin C

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.4 Vitamin C.”

(11) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin.”

(12) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(13) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(14) *Cronobacter* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp.”

(15) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

10-5 Other Foods for Infants/Young Children

1) Definition

Other foods for infants/young children refers to products manufactured/processed to assist infants/young children to adapt to foods during the weaning or development period; except for those in Food Type 10-1~10-4.

2) Requirements for Ingredients, etc.

(1) Raw ingredients shall not be irradiated.

(2) Dry ingredients shall be dried to low-moisture level before storage in order to prevent microbial growth; other ingredients shall be stored according to their properties by installing equipment to control temperature and humidity.

3) Manufacturing/Processing Standards

(1) They shall be pasteurized or sterilized in order to prevent microbial risks.

(2) Powder products shall be packaged/filled with nitrogen, carbon dioxide or a mixture of nitrogen and carbon dioxide; liquid products shall be sterilized and aseptic packaged.

3) In order to add nutrients contained in breast milk, or to make it suitable as a sole nutritional source for infants/young children, other nutrients may be added as necessary; provided, however, that usefulness of the applicable nutrients shall be scientifically proven, and the amount shall be added based on breast milk.

(4) For products intended for direct consumption, solids shall be based on 10~15%; and for those intended for consumption after dilution, solids concentration may vary.

(5) Tin tubes may not be used as containers of liquid and paste products.

(6) When used as an ingredient, honey or maple syrup shall be treated in a way that destroys the spores of *Clostridium botulinum*.

(7) Cocoa may be used for young children of 12 months or older; and the amount of use shall not be more than 1.5%. (For products intended for consumption after dilution, such amount shall be based on when consumed.)

(8) In order to prevent contamination by microorganisms or other sources, the spray drying equipment used in manufacturing powdered foods for infants/young children shall be periodically cleaned.

(9) Prior to packaging, efficient methods shall be used to prevent adulteration by foreign matters or metals, such as using sieves, traps, magnets, or electric metal detectors, etc.

4) Food Type

5) Specifications

(1) Water (%): Not more than 10.0 (only applicable to powder and solid products)

(2) Gelatinization degree (α) (%): Not less than 80.0 (only applicable to powder/solid products containing 25% or more grains, pulses, tuberous and corm vegetables, etc., or their products; and excluding those to be consumed after heat treatment)

(3) Sodium (mg/100g): Not more than 200 (for products intended for consumption after mixing with water, on a weight basis when mixed with water)

(4) Sodium saccharin: Shall not be detected

(5) Tar colors: Shall not be detected

(6) Coliforms: n=5, c=0, m=0 (except for sterilized products)

(7) Bacterial count: n=5, c=1, m=10, M=100 (n=5, c=0, m=0 for sterilized products; except for powdered products)

(8) *Cronobacter* spp.: n=5, c=0, m=0/60g (Limited to Other foods for Infants/young children under 12 months)

(9) *Bacillus cereus*: n=5, c=0, m=100 (except for sterilized products)

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Gelatinization degree (α)

Test the sample according to “10-4 Cereal Formula for Infants/Young Children, 4) Test Methods, (4) Gelatinization Degree (α).”

(3) Sodium

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.6 Sodium.”

(4) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium saccharin.”

(5) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(6) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Bacterial Count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(8) *Cronobacter* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp.”

(9) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

10-6 Foods for Special Medical Purposes

1) Definition

Foods for special medical purposes refers to a category of foods specially manufactured/processed and intended for oral or tube feeding of patients with a limited, impaired or disturbed capacity to take, digest, absorb or metabolize ordinary foodstuffs or those with nutritional requirements physiologically different from ordinary people due to diseases or clinical conditions in order to replace a full or partial meal.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Food products shall be manufactured/processed in a sanitary manner in accordance with the application principles of Hazard Analysis and Critical Control Points (HACCP); and pasteurized or sterilized in order to prevent microbial risks from harmful microorganisms, such as viruses or bacteria.

(2) Food products shall be manufactured/processed by considering consumers' capacity to take, digest, absorb, metabolize and excrete, etc. food according to the type of food.

(3) In mixing, manufacturing and processing of the ingredients, the standards for each establishment shall be supported scientifically in terms of nutritional, medical and physiological aspects.

(4) Selenium, chromium and molybdenum may be added as nutrients by considering consumers according to the type of food.

(5) Unhydrolyzed milk, powdered milk and whey may not be used as an ingredient for formulas for infants/young children with cow's milk protein allergy.

(6) The manufacturing/processing standards for foods for patients are classified by diseases as follows:

① Balanced nutritional food for patients shall be formulated with ingredients and added with nutrients, containing 50% or more daily value of vitamin A, B_1, B_2, B_6, C, D, E, niacin, folic acid, protein, calcium and iron per 1000 kcal of the product to replace a full or partial meal.

② Food for diabetics shall be formulated with ingredients and added with nutrients, containing 50% or more daily value of vitamin A, B_1, B_2, B_6, C, D, E, niacin, folic acid, protein, calcium, iron and zinc per 1000 kcal of the product to replace a full or partial meal. Calories from saturated fat should account for less than 10% of total calories. Cholesterol should not exceed 100 mg per 1000 kcal of the product; and monosaccharide and disaccharide calories should account for less than 10% of total calories.

③ Food for kidney disease patients shall be formulated with ingredients and added with nutrients, containing 50% or more daily value of vitamin B_1, B_2, B_6, C, D, E, niacin and folic acid, per 1000 kcal of the product to replace a full or partial meal. However, vitamin A and D shall be at least 20% of the daily value. Potassium and phosphorus are nutrients that need to be limited for kidney disease patients; and shall not exceed the indicated amount or shall be within the range. In addition, foods for non-dialysis kidney disease patients shall be formulated to contain 10% or less of total calories derived from protein; those for dialysis kidney disease patients, 12% or less, with at least 1.5 kilocalories per 1 mL (g) of the product. Sodium shall not exceed 800 mg per 1000 kcal of the product.

④ Hydrolyzed foods for intestinal disease patients shall be formulated with ingredients and added with nutrients, containing 50% or more daily value of vitamin A, B_1, B_2, B_6, C, D, E, niacin, folic acid, calcium, iron and zinc per 1000 kcal of the product. In addition, they should contain 30% or more daily value of protein per 1000 kcal of the product, supplied as hydrolysates or free amino acids.

⑤ Foods to provide calories and nutrition shall be ensured to have 3 kcal per mL (g)

⑥ Notwithstanding the provisions of above ①~⑤, foods may be manufactured/ processed as patient-specific by consulting with doctors, etc., to make them fit for certain patients

⑦ Other than those for the diseases specified in above ①~⑤, foods for patients shall be manufactured/processed in a way that meets nutritional needs for each disease.

⑧ Where the foods falling under the above paragraphs target a specific

demographic group, the Dietary Reference Intakes for Koreans (KDRIs) specific to such group may be used as the standard.

4) Food Type

(1) Food for patients

Foods for patients refers to foods manufactured/processed by adjusting nutrients in order to provide balanced nutrients needed for patients, and those able to fully or partially replace a meal; excluding foods falling under the type (2)~(4).

(2) Foods for patients with congenital metabolic disorders

Foods for patients with congenital metabolic disorders refers to products manufactured/processed by removing or limiting components that are not metabolized in the body, or by adding other necessary components for the above patients. For the purpose of this section, a congenital metabolic disorder is defined as a disease involving accumulation of harmful substances or deficiency of essential substances caused by inability of metabolizing enzymes or defects in transporting substances, etc., arising from inborn biochemical metabolism deficiency due to genetic disorders. Examples include but are not limited to: phenylketonuria; hypothyroidism; galactosemia; homocystinuria; maple syrup urine disease; congenital adrenal hyperplasia; and other disorders involving abnormal metabolism of amino acids, organic acids, carbohydrates, fats & fatty acids and minerals, etc.

(3) Formulas for Infants/young children with milk protein allergy

It refers to formulas manufactured/processed to replace breast milk or milk formulas for high-risk group infants/young children hypersensitive to milk proteins or with family history of allergic diseases; and made by using hydrolyzed milk proteins or amino acids as sole protein ingredients and adding nutrients, such as minerals and vitamins, etc., thereto. However, it excludes those classified as milk formulas; infant formulas; follow-up formulas; cereal formulas for infants/young children; other foods for infants/young children; and foods for patients with congenital metabolic disorders.

(4) Special formulas for infants/young children

It refers to products specially formulated to provide nutrition for normal

infants/young children (0~36 months) and immature or premature infants, etc., who have significantly different physiological nutritional requirements. However, it excludes those classified as infant formulas; follow-up formulas; cereal formulas for infants/young children; other foods for infants/young children; foods for patients with congenital metabolic disorders; and formulas for infants/young children with cow's milk protein allergy.

5) Specifications

Item \ Type	Foods for patients	Foods for patients with congenital metabolic disroders
(1) Water (%)	Not more than 10.0% (only applicable to powder products)	
(2) Calorie	-	-
(3) Crude protein	Not less than the indicated amount.	Not less than the indicated amount. (however, where necessary to limit the amount due to characteristics of the disease, not more than the indicated amount)
(4) Crude fat	Not less than the indicated amount.	Not less than the indicated amount. (however, where necessary to limit the amount due to characteristics of the disease, not more than the indicated amount)
(5) Vitamins	Not less than the indicated amount. (only applicable to Vitamin A, B_1, B_2, B_6, C, D, E, niacin and folic acid)	Not less than the indicated amount. (however, where necessary to limit the amount due to characteristics of the disease, not more than the indicated amount)
(6) Minerals	Not less than the indicated amount. (only applicable to calcium, iron and zinc)	Not less than the indicated amount. (however, where necessary to limit the amount due to characteristics of the disease, not more than the indicated amount)
(7) Fluorine	Not more than 0.2 mg/100kcal. (only applicable to those with food additives containing fluorine)	-
(8) Coliforms	n=5, c=0, m=0	
(9) Bacterial count	n=5, c=1, m=10, M=100 (n=5, c=2, m=1,000, M=10,000 for powder products)	
(10) Tar colors	Not detected	

Item \ Type	Foods for patients	Foods for patients with congenital metabolic disroders
(11) *Bacillus cereus*	n=5, c=0, m=100	

Item \ Type	Formulas for infants/young children with cow's milk protein allergy	Special Formulas for Infants/Young Children
(1) Water (%)	Not more than 10.0% (only applicable to powder products)	
(2) Crude protein	Not less than the indicated amount	
(3) Crude fat	Not less than the indicated amount	
(4) Vitamins	Not less than the indicated amount	
(5) Minerals	Not less than the indicated amoung; however, for selenium, not more than 9 ㎍/100 kcal, for chromium and molybdenum, not more than 10 ㎍/100 kcal.	
(6) Coliforms	n=5, c=0, m=0	
(7) Bacterial count	n=5, c=1, m=10, M=100 (n=5, c=2, m=1,000, M=10,000 for powder products)	
(8) Tar colors	Not detected	
(9) Carbide	Not more than 7.5 mg/100 g (Compare with the standard Disk A set forth by ADPI in the U.S.); (however, only applicable to powder products)	
(10) *Cronobacter* spp.	n=5, c=0, m=0/60g (only applicable to powder products for infants under 6 months of age)	
(11) *Bacillus cereus*	n=5, c=0, m=100	

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Nutrients

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.2 Micronutrient Test Methods.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(6) *Cronobacter* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp..”

(7) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(8) Carbide

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matters, 1.2.2 Foreign Matters for Each Food Product, C. Test Operation, F) Ice Cream Powder, Evaporated Milk, Sweetened Condensed Milk, Sweetened Condensed Skim Milk, Whole Milk Powder, Skim Milk Powder, Sweetened Milk Powder & Modified Milk Powder, and Formula.”

10-7 Weight Control Formulas

1) Definition

Weight control formulas refers to foods formulated by adding or subtracting required nutrients to fully or partially replace a meal for those who need to lose or gain weight.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) As a full or partial meal replacement, ingredients shall be mixed and nutrients shall be added to ensure 25% or more daily value of vitamin A, B_1, B_2, B_6, C, niacin, folic acid and vitamin E and 10% or more daily value of protein, calcium, iron and zinc per serving. However, for the foods targeting a specific demographic group, the Dietary Reference Intakes for Koreans (KDRIs) specific to such group may be used as the standard.

(2) A formula replacing a full day meal shall provide not less than 800 kcal and not more than 1200 kcal. This formula shall be divided into 3~4 servings a day; each individual serving shall replace a meal and have 1/3~1/4 of total daily calories. A formula replacing 1~2 meals a day shall provide not less than 200 kcal and not more than 400 kcal per serving; provided, however, that calories may be calculated based on the serving method declared on the product label.

4) Food Type

5) Specifications

(1) Water (%): Not more than 10.0 (only applicable to powder, granular and solid dry products)

(2) Crude protein (g): Not less than the indicated amount.

(3) Vitamins: Not less than the indicated amount (only applicable to vitamin A (μg), B_1 (mg), B_2 (mg), B_6 (mg), C (mg), niacin (mg), folic acid (μg) and vitamin E (mg)).

(4) Minerals: Not less than the indicated amount (only applicable to calcium (mg), iron (mg) and zinc (mg)).

(5) Coliforms: n=5, c=2, m=0, M=10

(6) *Bacillus cereus*: n=5, c=0, m=100 (n=5, c=0, m=1,000 for products using soy sauces and pastes as ingredients)

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(3) Vitamins

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2 Vitamins.”

(4) Minerals

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Minerals.”

(5) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

10-8 Foods for Pregnant/Lactating Women

1) Definition

Foods for pregnant/lactating women refers to products manufactured/processed to be used as a full or partial meal replacement for pregnant and lactating women who have different nutritional requirements from ordinary people due to pregnancy, delivery or lactation.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Vitamins and minerals, etc. to be added for use as a full or partial meal replacement for pregnant/lactating women shall be uniformly mixed in the products.

(2) Ingredients shall be mixed, and nutrients shall be added based on the Dietary Reference Intakes for Koreans (KDRIs) for pregnant/lactating women. In addition, the nutrient content of such products provided per day or serving shall be appropriately adjusted.

4) Food Type

5) Specifications

(1) Water (%): Not more than 10.0 (applicable to powder and solid products)

(2) Nutrients (%): Not less than the indicated amount

(3) Coliforms: n=5, c=0, m=0

(4) Bacterial count: n=5, c=1, m=10, M=100 (only applicable to liquid products)

(5) Tar colors: Shall not be detected

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Nutrients

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.2 Micronutrient Test Methods.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

11. Soy Sauces and Pastes

1) Definition

Soy sauces and pastes refers to products manufactured/processed by fermenting/aging ingredients of animal/plant origin cultivated with Aspergillus, etc.; or by fermenting/aging *meju* (fermented soybean lump), etc., as a main ingredient, after mixing with salt, etc. Such products include but are not limited to: Korean style *meju*; improved *meju*; Korean-style soy sauce; brewed soy sauce; acid-hydrolyzed soy sauce; enzyme-hydrolyzed soy sauce; blended soy sauce; Korean-style soybean paste; soybean paste; hot pepper soy paste; *chunjang* (black soybean paste); *chunggukjang* (fast-fermented soybean paste); and mixed paste, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) After fermentation or neutralization, crude soy sauce shall be filtered to remove any soy sauce, etc.

(2) After mixed with seasoning ingredients and food additives, etc., the filtered crude soy sauce shall be handled in a manner that prevents risks such as mold contamination.

(3) During manufacturing process, alcohol components may be used to enhance flavor and taste or to remove smells, etc.

(4) Monascus pigments shall not be used in manufacturing hot pepper soy paste, nor shall citrinin be detected.

4) Food Type

(1) Korean style *meju*

It refers to a product made by steaming or boiling soybeans as a main ingredient and subsequently forming and fermenting them.

(2) Improved *meju*

It refers to a product made by steaming or boiling soybeans as a main ingredient and subsequently fermenting them, using selected seed bacteria.

(3) Korean-style soy sauce

It refers to a product made by fermenting/aging *meju* as a main ingredient after mixing it with a saline solution, etc.; and subsequently processing the filtrate.

(4) Brewed soy sauce

It refers to a product made by cultivating Aspergillus, etc. in soybeans, defatted soybeans, or grains, etc.; mixing them with a saline solution, etc.; fermenting/aging them; and subsequently processing the filtrate.

(5) Acid-hydrolyzed soy sauce

It refers to a product made by hydrolyzing ingredients containing proteins with acid; and processing the filtrate.

(6) Enzyme-hydrolyzed soy sauce

It refers to a product made by hydrolyzing ingredients containing proteins with enzymes; and processing the filtrate.

(7) Blended soy sauce

It refers to a product made by mixing acid-hydrolyzed soy sauce or enzyme-hydrolyzed soy sauce with Korean style soy sauce or brewed soy sauce and processing the mixture; or by processing the filtrate after fermenting/aging crude acid-hydrolyzed soy sauce added with protein or carbohydrate ingredients; or by mixing such crude soy sauce with crude brewed soy sauce or crude acid-hydrolyzed soy sauce, etc., and processing the mixture.

(8) Korean-style *doenjang* (soybean paste)

It refers to a product made by adding a saline solution to Korean-style meju; fermenting it; and separating the filtrate.

(9) *Doenjang* (soybean paste)

It refers to a product made by fermenting/aging soybeans, rice, barley, wheat, or defatted soybeans, etc., as a main ingredient, after cultivating Aspergillus, etc., therein and mixing them with salt; or by fermenting *meju* in a saline solution, separating the filtrate and processing it.

(10) *Gochujang* (hot pepper soy paste)

It refers to a product made by cultivating Aspergillus, etc., in pulses or grains, etc., as a main ingredient, etc., adding hot pepper powder (not less than 6%) or salt, etc. thereto, and then fermenting/aging them; or by adding hot pepper powder (not less than 6%) or salt, etc., thereto after aging them.

(11) *Chunjang* (black soybean paste)

It refers to a product made by cultivating Aspergillus, etc., in soybeans, rice, barley, wheat or defatted soybeans, etc., as a main ingredient, etc., adding salt and caramel color, etc. thereto, and then fermenting/aging them; or by adding salt and caramel color, etc., thereto after aging them.

(12) *Chunggukjang* (fast-fermented soybean paste)

It refers to a product in paste, pill or powder form, manufactured by fermenting pulses, as a main ingredient, with Bacillus bacteria; or seasoning such soybeans with hot pepper powder and garlic, etc.

(13) Mixed paste

It refers to a product, manufactured/processed by using soy sauce, soybean paste, hot pepper soy paste, *chunjang*, or *Chunggukjang*, etc., as a main ingredient, with or without mixing with food or food additives. It includes seasoned soybean paste, seasoned hot pepper soy paste, or other mixed soy sauce and paste products (not less than 50% Soy sauce and paste).

(14) Other soy sauces and pastes

It refers to soy sauce, soybean paste and hot pepper soy paste, other than those falling under Food Type (3)~(10).

5) Specifications

(1) Total nitrogen (w/v%): Not less than 0.8 (only applicable to Soy sauce; for Korean-style soy sauce, not less than 0.7)

(2) Tar colors: Shall not be detected

(3) Coliforms: n=5, c=1, m=0, M=10 [only applicable to Mixed paste (pasteurized products)]

(4) Preservatives (g/kg; however, g/L for soy sauce): No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (as sorbic acid; only applicable to Korean-style soybean paste, soybean paste, hot pepper soy paste, *chunjang*, *chunggukjang* (non-dried products only) and mixed paste)
Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 0.6 (as benzoic acid; only applicable to soy sauce. When used in combination with methyl ρ-hydroxybenzoate or ethyl ρ-hydroxybenzoate, the sum of benzoic acid and parahydroxybenzoic acid shall not be more than 0.6 g/kg; and parahydroxybenzoic acid shall not be more than 0.25 g/kg.)
Methyl ρ-Hydroxybenzoate; Ethyl ρ-Hydroxybenzoate	Not more than 0.25 (as parahydroxybenzoic acid; only applicable to soy sauce. When used in combination with benzoic acid, sodium benzoate, potassium benzoate and calcium benzoate, the sum of parahydroxybenzoic acid and benzoic acid shall not be more than 0.6 g/kg; and parahydroxybenzoic acid shall not be more than 0.25 g/kg.)

6) Test Methods

For soy sauce powder products, a sample shall be diluted with distilled water according to the indicated concentration or dilution factor.

(1) Total nitrogen

Add water to a 10 mL sample to make 100 mL, and take 20 mL out of the sample. Then, test it according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein,” and calculate a nitrogen amount.

(2) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

12. Seasoning Foods

Seasoning foods refers to products used to enhance taste and flavor in manufacturing/processing/preparing foods; including Vinegars, Sauces, Curries, Hot pepper powder, Spice products and Edible salt.

12-1 Vinegars

1) Definition

Vinegars refers to fermented vinegars produced by fermenting grains, fruits, or alcoholic beverages, etc., as main ingredients, or by mixing/aging grain saccharified liquid or fruit must, etc. with such fermented ingredients; or diluted acetic acid, manufactured by diluting glacial acetic acid or glacial acetic acid with drinking water.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Fermented vinegars and diluted acetic acid shall not be mixed together.

4) Food Type

(1) Brewed vinegar

It refers to a solution produced by acetic acid fermentation of fruits/grain mash (wash), fruit wine, fruit must, grain wine, grain saccharified liquid, spirits or saccharides, etc., as ingredients; and by mixing fruit must or grain saccharified liquid, etc. with such fermented solution and aging the mixture. Among them, a solution obtained by fermenting persimmons with acetic acid bacteria is called persimmon vinegar.

(2) Diluted acetic acid

It refers to a solution made by diluting glacial acetic acid or acetic acid with drinking water.

5) Specifications

(1) Total acid (as acetic acid, w/v%): 4.0~20.0 (Not less than 2.6 for persimmon vinegar)

(2) Tar colors： Shall not be detected

(3) Preservatives (g/L): No preservatives shall be detected except for the following:

Methyl ρ-Hydroxybenzoate; Ethyl ρ-Hydroxybenzoate	Not more than 0.1 (as parahydroxybenzoic acid)

6) Test Methods

(1) Total acid

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.1.1 Total Acid.”

(2) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(3) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

12-2 Sauces

1) Definition

Sauces refers to products produced by adding spices, soy sauces and pastes, saccharides, edible salt, vinegars and edible fats and oils, etc., to ingredients of animal/plant of origin; and used to enhance taste and flavor before/after food preparation; however, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

(1) Alcoholic components may be used to enhance taste and flavor.

3) Manufacturing/Processing Standards

4) Food Type

(1) Sauce

It refers to products produced by adding spices, soy sauces and pastes, saccharides, edible salt or vinegars, etc., to ingredients of animal/plant origin and mixing them together; or by fermenting/aging such mixture. However, those for which separate Standards and Specifications have been established are excluded.

(2) Mayonnaise

It refers to a product manufactured through emulsification or other methods, either using edible fat and oil and egg yolks/whole eggs; or using ingredients, such as vinegar or fruit juice, egg yolks, egg whites, hydrolyzed protein, edible salt, saccharides and spices, etc.

(3) Tomato ketchup

It refers to a product made primarily from tomatoes or tomato concentrate (not less than 20% based on 25% soluble solids) and manufactured by adding saccharides, vinegars, edible salt, spices and citric acid, etc., thereto.

(4) Composite seasoning

It refers to a product manufactured by mixing food with saccharides, edible salt, spices, hydrolyzed protein, yeast or its extract, or food additives, etc., and processing the mixture into powder, granular or solid form, etc.; and used to give a unique taste and flavor to food.

5) Specifications

(1) Water (%): Not more than 8.0 (only applicable to Composite seasoning)

(2) Coliforms： n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(3) *Escherichia coli*: n=5, c=2, m=0, M=10 (only applicable to non-pasteurized products; n=5, c=2, m=0, M=10 for Composite seasoning)

(4) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized products)

(5) Tar colors： Shall not be detected

(6) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Methyl ρ-Hydroxybenzoate; Ethyl ρ-Hydroxybenzoate	Not more than 0.2 (as parahydroxybenzoic acid; only applicable to Sauces)
Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 0.5 (as sorbic acid; only applicable to Tomato ketchup)

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia* Coli.”

(4) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(6) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

12-3 Curries

1) Definition

Curries refers to curry powder made using spices as ingredients with or without the addition of food or food additives, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Curry powder

It refers to a product made by using natural herbs and spice plants, such as curcuma (turmeric), ginger, coriander, or cumin, etc. as ingredients; and drying/processing them into powder.

(2) Curry

It refers to a product made by adding food or food additives, etc., to curry powder (solid or powder products shall contain not less than 5% curry powder; liquid products, not less than 1% curry powder).

5) Specifications

(1) Tar colors： Shall not be detected

(2) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized products)

(3) Coliforms： n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(4) *Escherichia coli*: n=5, c=1, m=0, M=10 (except for pasteurized products)

6) Test Methods

(1) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(2) Bacterial coun

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4.

Microbiological Test Methods, 4.7 Coliforms.”

(4) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

12-4 Hot Pepper Powder or Shredded Hot Pepper

1) Definition

Hot pepper powder or Shredded hot pepper refers to products that are obtained by making into powder or shredding mature fruits of hot peppers or their varieties belonging to Solanaceae Family after drying them.

2) Requirements for Ingredients, etc.

(1) Hot peppers for manufacturing hot pepper powder shall be used only after removing stems (except calyces), and the diseased part of hot peppers shall be removed before use.

3) Manufacturing/Processing Standards

(1) When manufacturing Hot pepper powder, no materials shall be used other than the hot pepper seeds contained in hot peppers used as ingredient (such as, edible salt, saccharides, bran, carbonate and starch, etc.)

(2) The seeds contained in hot peppers may be used only when obtained from the hot peppers used as an ingredient; and those obtained otherwise shall not be added and used in manufacturing hot pepper powder.

(3) Hot pepper powder shall be placed and packed in packages or containers meeting the “the Standards and Specifications for Food Utensils, Containers and Packages,” such as aluminized PET Film packaging film or PE bottles, glass, etc. as soon as possible; and protected from moisture and sunlight in order to prevent microbial contamination and quality deterioration.

(4) Metal detectors shall be installed in the manufacturing process of Hot pepper powder.

4) Food Type

(1) Hot Pepper Powder

It refers to products that are obtained by drying and making into powder mature fruits of hot peppers or their varieties belonging to Solanaceae Family.

(2) Shredded Hot Pepper

It refers to products that are obtained by drying and shredding mature fruits of hot peppers or their varieties belonging to Solanaceae Family.

5) Specifications

(1) Water (%)： Not more than 15.0

(2) Ash (%): Not more than 7.0

(3) Acid-insoluble ash (%): Not more than 0.5

(4) Adulterants: Not detected (starch, bran, carbonate and edible salt, etc.)

(5) Mold count (%)： Not more than 20 (except for Shredded hot pepper)

(6) Tar colors: shall not be detected

(7) *Escherichia coli*: n=5, c=2, m=0, M=10

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Ash

Precisely measure 2~4 g of sample and test it according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash.”

(3) Acid-insoluble ash

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.2.1 Acid-insoluble Ash.”

(4) Adulterants

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.2.2 Adulterants.”

(5) Mold count

Test the sample according to “Chapter 7. General Test Methods, 1.7 Mold Count.”

(6) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(7) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

12-5 Spice Products

1) Definition

Spice products refers to products made by simply processing the leaves, stems, fruits and roots of spice plants (including hot pepper, garlic, ginger;) or mixing food or food additives with such spice plants and processing the mixture,; and used to enhance taste and flavor of other foods. However, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Natural spices shall not be mixed with food or food additives other than spice plants.

(2) In manufacturing spice preparation containing hot pepper or hot pepper powder, monascus pigment shall not be used, nor shall citrinin be detected.

4) Food Type

(1) Natural spice

It refers to products made by processing spice plants into powder, etc.

(2) Spice preparation

It refers to products made by mixing food or food additives with natural spices and processing the mixture.

5) Specifications

(1) Adulterants : Shall not be detected (only applicable to Natural spices)

(2) Tar colors : Shall not be detected (except horse radish products or mustard products)

(3) Coliforms : n=5, c=2, m=0, M=10 (only applicable to pasteurized products)

(4) *Escherichia coli* : n=5, c=2, m=0, M=10 (except pasteurized or dried products)

(5) Mold count (%) : Not more than 10 (only applicable to products containing hot pepper or hot pepper powder)

6) Test Methods

(1) Adulterants

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.3.1 Adulterants.”

(2) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(5) Mold count

Test the sample according to “Chapter 7. General Test Methods, 1.7 Mold Count.”

12-6 Edible Salts

1) Definition

Edible salts refers to a product made by re-treating or processing crystals, mainly consisting of sodium chloride obtained from seawater (including deep sea water), rock salt, or lake salt, etc.; or crystallizing or refining/crystallizing seawater.

2) Requirements for Ingredients, etc.

(1) Solar salt and Other salts imported for food purposes shall be classified/certified as fit for human consumption in the country of origin and produced in a sanitary manner that meets the definition of each type of edible salts.

(2) Solar salt shall not be added with other materials, such as food additives, etc.

(3) Edible salt shall not be mixed with salts that are not for human consumption, such as industrial salts, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Solar salt

It refers to salt crystals mainly consisting of sodium chloride obtained by naturally evaporating seawater in a salt pond; and salts obtained by grinding, washing, dewatering or drying such crystals.

(2) Reworked salt

It refers to salt produced by dissolving, filtering, precipitating, recrystallizing, and dewatering crude salt (100%) with purified water, seawater or seawater concentrate, etc.

(3) Burnt/molten salt

It refers to salt obtained by transforming its original form using the methods, such as burning/melting of crude salt (100%); except for those processed by washing, grinding or compression of crude salt, etc.

(4) Refined salt

It refers to salt manufactured by adding brine concentrated/refined from seawater (including deep sea water) or water dissolved with crude salt (100%) to evaporation equipment.

(5) Other salt

Other salts refers to salts, other than those specified in Food Type (1) to (4) above, that are manufactured into powder or crystalline form, etc., by processing rock salt or lake salt, etc. to make it fit for human consumption.

(6) Processed salt

It refers to salt produced by mixing different types of edible salt together, or adding food or food additives to not less than 50% Solar salt, Reworked salt, Burnt/Molten salt, Refined salt or Other salts; and processing such mixture.

5) Specifications

Item \ Type	Solar salt	Reworked salt	Burnt/Molten salt	Refined salt	Other salts	Processed salt
(1) Sodium chloride (%)	Not less than 70.0	Not less than 88.0	Not less than 88.0	Not less than 95.0 (Not less than 70.0 for deep sea water salt)	Not less than 88.0	Not less than 35.0
(2) Total chlorine (%)	Not less than 40.0	Not less than 54.0	Not less than 50.0	Not less than 58.0 (Not less than 40.0 for deep sea water salt)	Not less than 54.0	Not less than 20.0
(3) Water (%)	Not more than 15.0	Not more than 9.0	Not more than 4.0	Not more than 4.0 (Not more than 10.0 for deep sea water salt)	Not more than 9.0	Not more than 5.5
(4) Insolubles (%)	Not more than 0.15 (Not more than 0.3 for gray salt)	Not more than 0.02	Not more than 3.0	Not more than 0.02	Not more than 0.15	-
(5) Sulfateion (%)	Not more than 5.0	Not more than 5.0	Not more than 5.0	Not more than 0.4 (Not more than 5.0 for deep sea water salt)	Not more than 5.0	Not more than 5.0
(6) Arsenic (mg/kg)	Not more than 0.5					
(7) Lead (mg/kg)	Not more than 2.0					
(8) Cadmium (mg/kg)	Not more than 0.5					
(9) Mercury (mg/kg)	Not more than 0.1					
(10) Ferrocyanide ion (g/kg)	Not detected			Not more than 0.010		

6) Test Methods

(1) Sample preparation

Grind the sample into particles to make them pass through a 0.84 mm sieve, but not through a 0.177 mm sieve, and mix them well.

(2) Sodium chloride

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.5 Edible Salt.”

(3) Total chlorine

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.4.1 Total Chlorine.”

(4) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(5) Insolubles

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.4.2 Insolubles.”

(6) Sulfateion

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.4.3 Sulfateion.”

(7) Arsenic

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(8) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(9) Cadmium

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for

Heavy Metals.”

(10) Mercury

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals, 10.1.2.4 Mercury.”

(11) Ferrocyanide ion

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.4.5 Ferrocyanide ion.”

13. Pickled Foods or Boiled Foods

Pickled foods or boiled foods refers to foods manufactured by adding edible salt, vinegar, saccharides or soy sauces and pastes to ingredients of animal/plant origin and pickling or boiling them; such as K*imchi* products, Pickled food products and Boiled foods.

13-1 *Kimchi* Products

1) Definition

Kimchi products refers to *kimchi* made by using vegetables, such as Korean cabbage, etc., as main ingredients, and processing them with/without fermentation after pickling and seasoning mixing process; and *kimchi* seasoning used for manufacturing kimchi.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Vegetables used as an ingredient shall be fully washed to remove foreign matters.

4) Food Type

(1) *Kimchisok* (seasoned materials for *kimchi*)

Kimchisok (seasoned materials for *kimchi*) refers to a product made by adding hot pepper powder, saccharides and edible salt, etc., to ingredients of plant origin and mixing them; and used in making *kimchi* by being added and mixed into vegetables, etc.

(2) *Kimchi*

It refers to a product made by using vegetables, such as Korean cabbage, etc., as main ingredients, with/without fermentation after pickling and seasoning mixing process; or by processing such vegetables.

5) Specifications

(1) Lead (mg/kg): Not more than 0.3

(2) Cadmium (mg/kg): Not more than 0.2

(3) Tar colors： Shall not be detected

(4) Preservatives： Shall not be detected

(5) Coliforms：n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

6) Test Methods

(1) Lead and Cadmium

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals.”

(2) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(3) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(4) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

13-2 Pickled Food Products

1) Definition

Pickled food products refers to Pickled foods and Sugar-preserved foods manufactured by preserving vegetables, fruits, spices, wild plants, fishery products, etc., in edible salt, vinegar, saccharide or soy sauces and pastes, etc., and processing them with or without the addition of other foods. However, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Pickled food

Pickled food refers to foods manufactured by preserving main ingredients in edible salt, soy sauces and pastes, or vinegar, etc.; or by mixing such ingredients and seasoning/processing the mixture.

(2) Sugar-preserved food

Sugar-preserved foods refers to foods manufactured by preserving main ingredients in saccharides, such as honey or saccharides, etc.; or by processing such preserved foods after adding food or food additives thereto. Those with water content of not more than 10% are defined as sugar-preserved dried foods.

5) Specifications

(1) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized products)

(2) Coliforms： n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(3) *Escherichia coli*： n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products)

(4) Tar colors： Shall not be detected (except for hermetically sealed and heat-pasteurized or sterilized products)

(5) Preservatives (g/kg): No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (as sorbic acid; except for sugar-preserved, vinegar-pickled foods)
	Not more than 0.5 [as sorbic acid; only applicable to sugar-preserved foods (excluding sugar-preserved dried products)]
	Not more than 0.5 (as sorbic acid; only applicable to vinegar-picked foods. When used in combination with benzoic acid, sodium benzoate, potassium benzoate and calcium benzoate, the sum of sorbic acid and benzoic acid shall not be more than 1.5 g/kg; and benzoic acid shall not be more than 1.0 g/kg.)
Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 1.0 (as benzoic acid; only applicable to vinegar-picked foods. When used in combination with sorbic acid, potassium sorbate and calcium sorbate, the sum of benzoic acid and sorbic acid shall not be more than 1.5 g/kg; and sorbic acid shall not be more than 0.5 g/kg.)

6) Test Methods

(1) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Escherichia coli

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 Escherichia Coli.”

(4) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(5) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

13-3 Boiled Foods

1) Definition

Boiled foods refers to foods made primarily from ingredients of animal/plant origin by heating and boiling or roasting them after adding edible salt, soy sauces and pastes and saccharides, etc.; or by seasoning and processing such boiled ingredients.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized products)

(2) Coliforms： n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(3) Tar colors ： Shall not be detected

(4) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (as sorbic acid; only applicable to pastes of beans, such as red beans, etc.)

6) Test Methods

(1) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(4) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

14. Alcoholic Beverages

Alcoholic beverages refers to alcoholic liquors manufactured/processed by fermenting and distilling grains, tuberous and corm vegetables, fruits and starch ingredients, etc. used as main ingredients, as set forth by the Liquor Tax Act, such as fermented alcoholic beverages, distilled alcoholic beverages and spirits, etc.

14-1 *Takju* (Korean Turbid Rice Wine)

1) Definition

Takju (Korean turbid rice wine) refers to a turbid liquid product manufactured by conditioning mash fermented from starch ingredients (except germinated grains), *koji*, ingredients of plant origin and water, etc., with/without the addition of carbon dioxide, etc. during a conditioning process.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Total acid (w/v%)： Not more than 0.5 (as acetic acid)

(3) Methanol (mg/mL)： Not more than 0.5

(4) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 0.2 (as sorbic acid)

(5) Coliforms: n=5, c=2, m=0, M=10 (only applicable to pasteurized products)

(6) *Escherichia coli*: n=5, c=2, m=0, M=10 (except pasteurized products)

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Total acid

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.1 Total Acid.”

(3) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

(4) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(5) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

14-2 *Yakju* (Korean Clear Rice Wine)

1) Definition

Yakju (Korean clear rice wine) refers to a clear liquid product manufactured by filtering and conditioning mash fermented from starch ingredients (except germinated grains), *koji*, ingredients of plant origin and water, etc., with/without the addition of spirits, etc. during a fermentation/conditioning process.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%) : Conform to the provisions of the Liquor Tax Act.

(2) Total acid (w/v%) : Not more than 0.7 (as acetic acid)

(3) Methanol (mg/mL) : Not more than 0.5

(4) Preservatives (g/kg) : No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 0.2 (as sorbic acid)

(5) Coliforms: n=5, c=2, m=0, M=10 (only applicable to pasteurized products)

(6) *Escherichia coli*: n=5, c=2, m=0, M=10 (except pasteurized products)

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Total acid

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.1 Total Acid.”

(3) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test

Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

(4) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(5) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

14-3 *Cheongju* (Korean Refined Rice Wine)

1) Definition

Cheongju (Korean refined rice wine) refers to a product manufactured by filtering and conditioning mash fermented from rice among grains (including glutinous rice), *koji* and water, etc., with/without the addition of spirits, etc. during a fermentation/conditioning process.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Total acid (w/v%)： Not more than 0.3 (as succinic acid)

(3) Methanol (mg/mL)： Not more than 0.5

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Total acid

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.1 Total Acid.”

However, 0.1 N sodium hydroxide solution 1 mL = 0.005 g succinic acid.

(3) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

14-4 Beer

1) Definition

Beer refers to a product manufactured by conditioning mash fermented or filtered from germinated grains, hop, starch ingredients and water, etc., with/without the addition of carbon dioxide and spirits, etc. during a fermentation/conditioning process.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methanol (mg/mL)： Not more than 0.5

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

14-5 Fruit Wine

1) Definition

Fruit wine refers to a product made by fermenting fruits or fruits added with sugars; or by mixing mash with fruit juice, carbon dioxide or alcoholic beverages, etc. and filtering/conditioning the mixture.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Oak chips (bar) made of *Quercus* spp. wood may be used for flavoring purposes in aging fruit wines, but shall be removed before completion of the finished products; provided, however, that oak chips (bar) shall not be chemically treated in any way other than heating (roasting).

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methanol (mg/mL)： Not more than 1.0

(3) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 0.2 (as sorbic acid)

(4) Lead (mg/kg): Not more than 0.2 (only applicable to grape wine)

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

(3) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1

Preservatives.”

(4) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1.2.1 Lead.”

14-6 *Soju* (Korean Distilled Liquor)

1) Definition

Soju (Korean distilled liquor) refers to a product manufactured by fermentation using starch ingredients, koji and water, etc. and distilling them by methods other than continuous distillation; or by diluting spirits with water, with/without mixing additives, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methano l(mg/mL)： Not more than 0.5

(3) Aldehyde (mg/100 mL)： Not more than 70.0

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

(3) Aldehyde

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.2.1 Aldehyde.”

14-7 Whisky

1) Definition

Whisky refers to a product made by distilling wash fermented from germinated grains, with/without the addition of grains using water, etc. as an ingredient; and storing it in a cask.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methanol (mg/mL)： Not more than 0.5

(3) Aldehyde (mg/100mL)： Not more than 70.0

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

(3) Aldehyde

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.2.1 Aldehyde.”

14-8 Brandy

1) Definition

Brandy refers to a product made by distilling fruit wine (including fruit wine draff) and storing it in a cask.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methanol (mg/mL)： Not more than 1.0

(3) Aldehyde (mg/100mL)： Not more than 70.0

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

(3) Aldehyde

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.2.1 Aldehyde.”

14-9 General Distilled Alcoholic Beverage

1) Definition

General distilled alcoholic beverage refers to products manufactured by fermenting and distilling ingredients containing starch and sugar, such as *kaoliang* liquor, rum, gin, vodka and tequila, etc.; or by mixing distilled spirits.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methanol (mg/mL)： Not more than 0.5 (not more than 1.0 only for products whose main ingredient is *Agave tequilana*)

(3) Aldehyde (mg/100 mL)： Not more than 70.0

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

(3) Aldehyde

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.2.1 Aldehyde.”

14-10 Liqueur

1) Definition

Liqueur refers to a product manufactured by adding sugars, ingredients of plant origin and extracts, etc., to distilled spirits.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methanol (mg/mL)： Not more than 1.0

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

14-11 Other Alcoholic Beverages

1) Definition

Other alcoholic beverages refers to liquors other than those included in 14-1 *Takju* (Korean Turbid Rice Wine) to 14-10 Liqueur and 14-12 Spirits.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Ethanol (v/v%)： Conform to the provisions of the Liquor Tax Act.

(2) Methanol (mg/mL)： Not more than 1.0

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.2 Methanol.”

14-12 Spirits

1) Definition

Spirits refers to products manufactured by fermenting and distilling starch or saccharide ingredients, or by distilling crude spirits; and can be consumed as a beverage after dilution; except for crude spirits that cannot be consumed for direct drinking unless they are refined due to impurities contained, but can be consumed as such, if refined.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

	Spirits	Grain Spirits
(1) Properties and conditions	Colorless and transparent without suspended solids or off-taste or flavor	Colorless and transparent with unique flavor
(2) Ethanol (v/v%)	Not less than 95	85～90
(3) Residue on evaporation (mg/100 g)	Not more than 2.5	Not more than 2.5
(4) Total acid (acetic acid w/v%)	Not more than 0.002	Not more than 0.05
(5) Aldehyde (acetaldehyde mg/100 ml)	Not more than 1	Not more than 10
(6) Methanol (mg/ml)	Not more than 0.15	Not more than 0.5
(7) Fusel oil (v/v%)	Not more than 0.01	Not more than 0.5
(8) Heavy metals (mg/kg)	Not detected	Not more than 3 for copper
(9) Permanganate reducing agent	Shall not be discolored more than the standard solution within 5 minutes	-
(10) Sulfuric acid color reaction	Not detected	-
(11) Chloride	Not detected	-

6) Test Methods

(1) Properties and Conditions

Add 30 mL of test solution and water, respectively to a test tube (inside

diameter, approx. 23 mm) and check whether the mixed solution is colorless/transparent compared to water. In addition, when diluted to 25% concentration, the solution shall keep its unique flavor without off-taste/flavor.

(2) Ethanol

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.1 Ethanol.”

(3) Residue on evaporation

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.2 Residue on Evaporation.”

(4) Total acid

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.3 Total Acid.”

(5) Aldehyde, methanol and fusel oil

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.4 Aldehyde, Methanol and Fusel Oil.”

(6) Heavy metals

Test the sample according to “Chapter 7. General Test Methods, 10.1.2.8 Heavy Metals;” (however, for grain spirits, according to “Chapter 7. General Test Methods, 10.1.2.9 Other Metals.”)

(7) Permanganate reducing agent

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.5 Permanganate Reducing Agent.”

(8) Sulfuric acid color reaction

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.6 Sulfuric Acid Color Reaction.”

(9) Chloride

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.7 Chloride.”

15. Processed Agricultural Foods

Processed agricultural foods refers to foods produced by processing agricultural products as main ingredients, such as Starch products, Wheat flour products, Processed peanut or nut products, Cereals, Parboiled rice and Enzyme foods, etc.; however, those for which separate Standards and Specifications have been established are excluded.

15-1 Starch Products

1) Definition

Starch products refers to products obtained by grinding, sifting and separation, etc. of starch ingredients; or processing them after adding food or food additives thereto.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) When manufacturing Starch, different types of starches shall not be mixed together.

4) Food Type

(1) Starch

It refers to powder obtained by grinding, sifting and separation, etc. of starch ingredients, such as potatoes or sweet potatoes, etc.

(2) Processed starch product

Processed starch product refers to food produced by processing starch, with/without the addition of food or food additives.

5) Specifications

(1) Properties and Conditions: Acceptable (only applicable to processed starch product)

(2) Foreign matters: Acceptable (only applicable to processed starch product)

(3) Water (%)

① Potato starch： Not more than 20.0

② Sweet potato starch： Not more than 18.0

③ Other starches： Not more than 15.0

(4) Ash (%)： Not more than 0.4 (except processed starch product)

(5) Acidity (consumption of 0.02 N sodium hydroxide solution)： Not more than 3 mL (except Processed starch product)

(6) Coliforms： n=5, c=1, m=0, M=10 (only applicable to pasteurized Processed starch products)

(7) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized Processed starch products)

(8) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to non-pasteurized Processed starch product for direct consumption without further processing or heating)

6) Test Methods

(1) Properties and Conditions

Test the sample according to “Chapter 7. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign matters

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matters.”

(3) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(4) Ash

Precisely measure 3~5 g of sample and test it according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash.”

(5) Acidity

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.8.1.1 Acidity.”

(6) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(8) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

15-2 Wheat Flour Products

1) Definition

Wheat flour products refers to powder obtained by processes, such as selection, damping, grinding and separation, etc. of wheat; or by adding food or food additives to such powder for the purpose of nutritional enhancement.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Wheat flour

It refers to powder obtained by processes, such as selection, damping, grinding and separation, etc. of wheat; and includes whole wheat flour, mixed wheat flour and semolina, etc.

(2) Nutrition-enriched wheat flour

It refers to wheat flour obtained by adding food or food additives to wheat flour for the purpose of nutritional enhancement.

5) Specifications

Type / Item	Wheat flour				Nutrition-Enriched Wheat Flour
	Grade 1	Grade 2	Grade 3	Others	
(1) Water(%)	Not more than 15.5				
(2) Ash (%)	Not more than 0.6	Not more than 0.9	Not more than 1.6	Not more than 2.0	Not more than 2.0
(3) Sieving (%)	Not more than 0.03				
(4) Lead (mg/kg)	Not more than 0.2				
(5) Cadmium (mg/kg)	Not more than 0.2				

6) Test Method

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Ash

Precisely measure 3~5 g of sample and test it according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash (based on 14% moisture).”

(3) Sieving

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.8.2.1 Sieving.”

(4) Lead

Test the sample according to “Chapter 7. General Test Methods, 10.1.2.1 Lead.”

(5) Cadmium

Test the sample according to “Chapter 7. General Test Methods, 10.1.2.2 Cadmium.”

15-3 Processed Peanut or Nut Products

1) Definition

Processed peanut or nut products refers to products made by simply processing peanuts or nuts; or by adding food or food additives to such peanuts or nuts and processing them, including Peanut butter or Processed peanut or nut product.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Peanut butter

It refers to a product made by roasting and grinding peanuts; adding food or food additives thereto; and processing them.

(2) Processed peanut or nut product

It refers to products made by simply processing peanuts or nuts; or adding food or food additives, such as sugar or edible fat and oil, etc., to such peanuts or nuts used as main ingredients and processing them.

5) Specifications

(1) Total aflatoxin (μg/kg): Not more than 15.0 (as the sum of B_1, B_2, G_1 and G_2; however, B_1 shall not be more than 10.0 μg/kg.)

(2) *Salmonella* spp.: n=5, c=0, m=0/25 g

6) Test Methods

(1) Aflatoxin

Test the sample according to “Chapter 7. General Test Methods, 9.1 Mycotoxins.”

(2) *Salmonella* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

15-4 Cereals

1) Definition

Cereals refers to products manufactured/processed, using grains, such as maize, wheat or rice, etc., as main ingredients, enhanced with nutrients, such as vitamins and minerals; and added with vegetables, fruits and nuts, etc. as necessary.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Raw materials and ingredients shall be mixed and nutrients shall be added to ensure 25% or more nutrient reference value of vitamin A, B_1, B_2, B_6, C, niacin, folic acid and vitamin E; and 10% or more nutrient value of iron and zinc per serving. However, products targeting specific age groups shall be manufactured based on the Recommended Daily Dietary Allowances for Koreans (KRDA) specific to such age groups.

4) Food Type

5) Specifications

(1) Vitamins: Not less than the indicated amount

(2) Minerals: Not less than the indicated amount

(3) Coliforms: n=5, c=2, m=0, M=10

6) Test Methods

(1) Vitamins

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2 Vitamins.”

(2) Minerals

Test the sample according to “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Minerals.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

15-5 Parboiled Rice

1) Definition

Parboiled rice refers to a product made by steaming, drying and milling rice kernels; or by steaming and drying milled rice.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Total aflatoxin (μg/kg): Not more than 15.0 (as the sum of B_1, B_2, G_1 and G_2; however, B_1 shall not be more than 10.0 μg/kg.)

(2) Sulfur dioxide (g/kg): Less than 0.030

(3) Lead (mg/kg): Not more than 0.2

(4) Cadmium (mg/kg): Not more than 0.2

6) Test Methods

(1) Aflatoxin

Test the sample according to “Chapter 7. General Test Methods, 9.1 Mycotoxins.”

(2) Sulfur dioxide

Test the sample according to “Chapter 7. General Test Methods, 3.5 Sulfurous Acid, Sodium Hydrosulfite and Its Salts.”

(3) Lead and Cadmium

Test the sample according to “Chapter 7. General Test Methods, 10.1 Tests for Heavy Metals, 10.1.2.1 Lead and 10.1.2.2 Cadmium Test Methods.”

15-6 Enzyme Food

1) Definition

Enzyme food refers to products made by culturing edible microorganisms in ingredients of plant origin to make the ingredients rich in enzymes; or extracting enzyme containing part from foods; or processing such part as a main ingredient.

2) Requirements for Ingredients, etc.

(1) Microorganisms used for culturing shall be safe.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Water (%): Not more than 10.0 (except for liquid products)

(2) Crude protein (%): Not less than 10.0

(3) α-Amylase: Not less than the indicated amount

(4) Protease: Not less than the indicated amount

(5) *Escherichia coli*: n=5, c=1, m=0, M=10

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.3 Nitrogenous Compounds, 2.1.3.1 Total Nitrogen and Crude Protein.”

(3) α- Amylase

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.8.3.1 α-Amylase.”

(4) Protease

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.8.3.2 Protease.”

(5) Escherichia coli

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 Escherichia Coli.”

15-7 Other Processed Agricultural Products

1) Definition

Other processed agricultural products refers to products made by processing agricultural products, such as fruits, vegetables, grains, pulses, tuberous and corm vegetable and mushrooms, etc. However, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Processed fruit/vegetable product

Processed fruit/vegetable product refers to products made by manufacturing/processing fruits, vegetables or mushrooms as main ingredients; or adding food or food additives to such products and processing them.

(2) Processed cereal product

Processed cereal product refers to products made by manufacturing/processing grains, such as rice, wheat or maize, etc., as a main ingredient; or adding food or food additives to such grains and processing them.

(3) Processed pulse product

Processed pulse product refers to products made by manufacturing/processing pulses, such as beans, green gram or red beans, etc., as a main ingredient; or adding food or food additives to such pulses and processing them.

(4) Processed tuberous and corm vegetable product

Processed tuberous and corm vegetable product refers to products made by manufacturing/processing tuberous and corm vegetables, such as potatoes, sweet potatoes or taro, etc., as a main ingredient; or adding food or food additives to such tuberous and corm vegetables and processing them.

(5) Other processed agricultural product

Other processed agricultural product refers to products made by manufacturing/processing agricultural products as a main ingredient; or adding food or food additives to such products and processing them; except those classified as other types.

5) Specifications

(1) Properties and Conditions： Acceptable

(2) Foreign Matters： Acceptable

(3) Acid value: Not more than 4.0 (only applicable to sesame and soybean powder); Not more than 5.0 (only applicable to oil-fried/oil-treated foods)

(4) Peroxide value: Not more than 60 (only applicable to oil-fried/oil-treated foods)

(5) Tar colors: Shall not be detected (only applicable to processed fruit/vegetable products)

(6) Coliforms： n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(7) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized products)

(8) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products for direct consumption without further processing or heating; and processed fruit/vegetable products)

(9) Total aflatoxin (μg/kg) : Not more than 15.0 (as the sum of B_1, B_2, G_1 and G_2; however, B_1 shall not be more than 10.0 μg/kg. It is only applicable to maize products for popcorn among processed grain products)

6) Test Methods

(1) Properties and Conditions

Test the sample according to “Chapter 7. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign Matters

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matters.”

(3) Acid value

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.3.1 Acid Value.”

(4) Peroxide value

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.3.5 Peroxide Value.”

(5) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(6) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(8) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(9) Aflatoxin

Test the sample according to “Chapter 7. General Test Methods, 9.1 Mycotoxins.”

16. Processed Meat Products and Packaged Meats

Processed meat products and packaged meats refers to products made by processing meat or processed meat products as a main ingredient, such as hams, sausages, bacons, dry stored meats, seasoned meats, meat extract products, meat containing products and packaged meats.

16-1 Hams

1) Definition

Hams refers to products made by sorting meat or processed meat products by part; then, trimming, curing and drying, or smoking or heat treating such parts; or by adding food or food additives to a chunk of meat, and then curing and drying, or smoking or heat treating and processing it.

2) Requirements for Ingredients, etc.

(1) For pressed hams manufactured by mixing fish meat, fish meat shall be less than 10% of total meat content.

3) Manufacturing/Processing Standards

4) Food Type

(1) Ham: Ham refers to products made by sorting meat by part; then, trimming and curing/drying or smoking or heat treating and processing such parts (including those with bones and skin).

(2) Raw ham: Raw ham refers to products made by salting meat parts; or adding food additives to such parts and smoking at low temperature or curing/drying them (including those with bones and skin).

(3) Pressed ham: Pressed ham refers to products made by salting a chunk of meat; or by adding food or food additives to such meat and curing/drying or smoking or heat treating it; and has meat content of not less than 75% and starch content of not more than 8%.

5) Specifications

(1) Nitrite ion (g/kg): Not more than 0.07

(2) Tar colors: Shall not be detected

(3) Preservatives (g/kg): No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 2.0 (as sorbic acid)

(4) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products).

(5) *Escherichia coli*: n=5, c=2, m=10, M=100 (only applicable to raw hams)

(6) Coliforms: n=5, c=2, m=10, M=100 (only applicable to pasteurized products)

(7) *Salmonella* spp.: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

(8) *Listeria monocytogenes*: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

(9) *Staphylococcus aureus*: n=5, c=1, m=10, M=100 (only applicable to pasteurized products or those for direct consumption; however, for raw hams, n=5, c=2, m=10, M=100)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

16-2 Sausages

1) Definition

Sausages refers to products made by grinding/mincing meat or processed meat products with/without salting, and smoking or heat treating them after adding food or food additives thereto; or fermenting at low temperature and curing or drying them; or stuffing them in casings and refrigerating/freezing them, (those with not less than 70% meat content and not more than 10% starch).

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Dry sausages shall be processed to have water content of not more than 35%; and semi-dry sausages, not more than 55%.

(2) Internal organs shall not be used in products refrigerated/frozen after stuffing ground meat into casings.

4) Food Type

(1) Sausage: Sausages refers to products made by curing/drying; or smoking or heating meat (including those mixed with eggs that are less than 10% of the meat content); or stuffing it into casings and refrigerating/freezing them after adding other food or food additives thereto.

(2) Fermented sausage: Fermented sausages refers to products made by fermenting meat and curing or drying it with/without smoking at low temperature after adding other food or food additives thereto.

(3) Mixed sausage: Mixed sausages refers to products made by curing/drying; or smoking or heating meat (including those mixed with fish meat or eggs that are less than 20% of the total meat content) after adding other food or food additives thereto.

5) Specifications

(1) Nitrite ion (g/kg): Not more than 0.07

(2) Preservatives (g/kg): No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 2.0 (as sorbic acid)

(3) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products).

(4) *Escherichia coli*: n=5, c=2, m=10, M=100 (only applicable to Fermented sausages)

(5) Coliforms: n=5, c=2, m=10, M=100 (only applicable to pasteurized products)

(6) Enterohemorrhagic *Escherichia coli*: n=5, c=0, m=0/25 g (only applicable to products refrigerated/frozen after stuffing ground meat into casings)

(7) *Salmonella* spp.: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

(8) *Listeria monocytogenes*: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

(9) *Staphylococcus aureus*: n=5, c=1, m=10, M=100 (only applicable to pasteurized products or those for direct consumption; however, for fermented sausages, n=5, c=2, m=10, M=100)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

16-3 Bacons

1) Definition

Bacons refers to products made by trimming and salting pork bellies or specific parts (pork sirloin, shoulder meat) and then smoking or heating them with or without the addition of food or food additives.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Nitrite ion (g/kg): Not more than 0.07

(2) Tar colors: Shall not be detected

(3) Preservatives (g/kg): No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 2.0 (as sorbic acid)

(4) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products).

(5) Coliforms: n=5, c=2, m=10, M=100 (only applicable to pasteurized products)

(6) *Salmonella* spp.: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

(7) *Listeria monocytogenes*: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

16-4 Dry Stored Meats

1) Definition

Dry stored meats refers to products made by drying, or heating and drying meat with or without the addition of food or food additives, (those with not less than 85% meat content).

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Dry stored meats shall be dried to have not more than 55% water.

4) Food Type

5) Specifications

(1) Nitrite ion (g/kg): Not more than 0.07

(2) Tar colors: Shall not be detected

(3) Preservatives (g/kg): No preservatives shall be detected except for the following

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 2.0 (as sorbic acid)

(4) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products).

(5) Coliforms: n=5, c=2, m=10, M=100 (only applicable to pasteurized products)

(6) *Salmonella* spp.: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

(7) *Listeria monocytogenes*: n=5, c=0, m=0/25g (only applicable to pasteurized products or those for direct consumption)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

16-5 Seasoned Meats

1) Definition

Seasoned meats refers to products made by seasoning meat or processed meat products added with food or food additives; or processing such seasoned products, such as by heating, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Seasoned meat: Seasoned meat refers to food made by seasoning meat or meat processed products added with food or food additives; or heating meat with/without seasoning; including *pyeonyuk* (cold meat cuts) or s*uyuk* (boiled meat slices), etc., (those with not less than 60% meat content).

(2) Ground meat product: Ground meat product refers to products made by mincing or grinding meat (except internal organs), adding food or food additives thereto, and refrigerating or freezing it; or by smoking or heating such meat; such as hamburger patties/meatballs/pork cutlets, etc. (those with not less than 50% meat content).

(3) Processed rib product: Processed rib product refers to products made by trimming ribs (only applicable to those with bones attached); adding food or food additives thereto; and seasoning and smoking, or heating them.

(4) Natural casing: Natural casing refers to products manufactured by salting (curing in brine) and processing livestock intestines, such as pork or lamb intestines, etc., such that they can contain meat or processed meat products.

5) Specifications

(1) Nitrite ion (g/kg): Not more than 0.07 (except Natural casings)

(2) Tar colors: Shall not be detected

(3) Preservatives (g/kg) : Shall not be detected

(4) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products)

(5) Coliforms: n=5, c=2, m=10, M=100 (only applicable to pasteurized products)

(6) *Salmonella* spp.: n=5, c=0, m=0/25 g (only applicable to pasteurized products

or those for direct consumption)

(7) *Listeria monocytogenes*: n=5, c=0, m=0/25 g (only applicable to pasteurized products or those for direct consumption)

(8) Enterohemorrhagic *Escherichia coli*: n=5, c=0, m=0/25 g (only applicable to ground meat products)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

16-6 Meat Extract Product

1) Definition

Meat extract product refers to a product extracted by water from meat used as a main ingredient; or processed by adding food or food additives to such extracts.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Water (%): Not more than 10.0 (only applicable to dried products)

(2) Tar colors: Shall not be detected

(3) Bacterial count: n=5, c=1, m=100, M=1,000 (only applicable to liquid products for direct consumption)

(4) Coliforms: n=5, c=1, m=0, M=10 (only applicable to pasteurized products; or liquid products for direct consumption).

(5) *Escherichia coli*: n=5, c=1, m=0, M=10 (except pasteurized products; and liquid products for direct consumption)

(6) *Salmonella* spp.: n=5, c=0, m=0/25 g (only applicable to pasteurized products or those for direct consumption)

(7) *Listeria monocytogenes*: n=5, c=0, m=0/25 g (only applicable to pasteurized products or those for direct consumption)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

16-7 Processed Meat Containing Product

1) Definition

Processed meat containing product refers to product manufactured/processed using meat as a main ingredient, other than those applicable to Food Types specified in 16-1~16-6.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Nitrite ion (g/kg)： Less than 0.07

(2) Tar colors： Shall not be detected

(3) Coliforms: n=5, c=2, m=10, M=100 (only applicable to pasteurized products)

(4) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products)

(5) *Salmonella* spp.: n=5, c=0, m=0/25 g (only applicable to pasteurized products)

(6) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 2.0 (as sorbic acid)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

16-8 Packaged Meat

1) Definition

Packaged meat refers to food made by cutting meat (including mincing or grinding) and refrigerating or freezing as it is in its original packages; and not added with other food or food additives, such as chemical synthetics, etc. (with 100% meat content).

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Properties and Conditions: Unique color and gloss without off-taste/flavor

(2) Tar colors: Shall not be detected

(3) Volatile basic nitrogen (mg%): Not more than 20

(4) Preservatives (g/kg): Shall not be detected

(5) Enterohemorrhagic *Escherichia coli*: n=5, c=0, m=0/25 g (only applicable to ground meat)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

17. Egg Products

17-1 Egg Product

1) Definition

Egg product refers to products manufactured by adding food or food additives to eggs or egg products used as a main ingredient, or by processing such eggs or products; including whole egg liquid, liquid egg yolks, liquid egg whites, whole egg powder, egg yolk powder, egg white powder, heated egg products and pidan.

2) Requirements for Ingredients, etc.

(1) Hairline-cracked eggs/dirty eggs/soft-shelled eggs shall not be used as an ingredient in non-pasteurized liquid egg products.

3) Manufacturing/Processing Standards

(1) Raw eggs to be used in processing process shall be carefully selected, removing eggs not fit for human consumption. In addition, shells shall be removed in a compartmented work place in a sanitary manner to prevent contamination.

(2) Eggs with eggshells contaminated with excrements, etc. shall be thoroughly cleaned and at the same time pasteurized with not less than 150 mg/L of sodium hypochlorite or using other methods with equivalent or better effect, before use.

(3) Pasteurized eggs shall be filtered, homogenized and pasteurized.

(4) For heat-pasteurization, heated egg product shall be heat-pasteurized for 20 minutes at 90°C; whole egg liquid, for 2 minutes and 30 seconds at 64°C; liquid egg yolks, for 3 minutes and 30 seconds at 60°C; liquid egg whites, for 9 minutes and 30 seconds at 55°C; or using other methods with equivalent or better effect.

(5) Egg white powder shall be obtained by drying egg whites after removing saccharide components therefrom in order to prevent discoloration/denaturation of products.

(6) Non-pasteurized liquid egg products shall be quickly cooled down to 5°C or

below after removing shells; and shall not be stored for more than 72 hours.

(7) Pasteurized products shall be quickly cooled down to 5°C or below after pasteurization process in order to minimize microbial growth.

(8) When refrigerated, raw eggs to be used as an ingredient shall be stored in separate areas from egg products.

(9) Eggs containing blood spots and meat spots shall be used after removing such spots using a proper method.

4) Food Type

(1) Whole egg liquid: Whole egg liquid refers to whole egg contents; or such contents added with edible salt or saccharides, etc.; or those frozen. (those with not less than 80% egg content)

(2) Liquid egg yolk: Liquid egg yolk refers to egg yolks; or such yolks added with edible salt or saccharides, etc.; or those frozen. (those with not less than 80% egg content)

(3) Liquid egg white: Liquid egg white refers to egg whites; or such whites added with edible salt or saccharides, etc.; or those frozen. (those with not less than 80% egg content)

(4) Whole egg powder: Whole egg powder refers to whole egg contents processed into powder form. (those with not less than 90% egg content)

(5) Egg yolk powder: Egg yolk powder refers to egg yolks processed into powder form. (those with not less than 90% egg content)

(6) Egg white powder: Egg white powder refers to egg whites processed into powder form. (those with not less than 90% egg content)

(7) Heated egg product: Heated eggs product refers to products made by heating eggs with or without the addition of food or food additives; or by boiling down or processing eggs, added with food or food additives with/without removing shells after boiling them in water. (those with not less than 30% egg content)

(8) Pidan: Pidan refers to products made by permeating seasonings, spices, etc. into eggs from outside the eggshells and aging it to give eggs a peculiar taste and hard texture (not less than 90% of egg contents)

5) Specifications

(1) Water (%) : Not more than 10.0 (only applicable to powder products)

(2) Bacterial count

① For pasteurized products or products for those for direct consumption: n=5, c=1, m=10,000, M=50,000

② Non-pasteurized products: n=5, c=1, m=500,000, M=1,000,000

(3) Coliforms:

① Pasteurized products: n=5, c=1, m=10, M=100

② Non-pasteurized products: n=5, c=1, m=100, M=1000 (However, n=5, c=0, m=0 for pidan)

(4) *Salmonella* spp.: n=5, c=0, m=0/25 g

(5) *Listeria monocytogenes*: n=5, c=0, m=0/25g (only applicable to pasteurized products or products for direct consumption)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

17-2 Processed Egg Containing Product

1) Definition

Processed egg containing product refers to products manufactured/processed using eggs as a main ingredient, other than those applicable to Food Type specified in 17-1.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Coliforms: n=5, c=1, m=10, M=100 (only applicable to pasteurized products)

(2) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products);

n=5, c=1, m=10,000, M=50,000 (only applicable to pasteurized products)

(3) *Salmonella* spp.: n=5, c=0, m=0/25 g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18. Milk Products

Milk products refers to products processed using raw milk as a main ingredient; such as Milks, Processed milks, Goat milk, Fermented milks, Butter milk, Concentrated milks, Milk creams, Butters, Cheeses, Powdered milks, Wheys, Lactose and Hydrolyzed milk protein products; except for those intended for drinking and containing not less than 0.5% coffee solids.

18-1 Milks

1) Definition

Milks refers to products made by pasteurizing or sterilizing raw milk (including partially skimmed milk) or by adjusting milk fat, or milk products reconstituted to contain similar components to raw milk.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Milks shall be pasteurized or sterilized.

(2) Milks may be standardized by reducing milk fat.

(3) Milks shall never be mixed with other materials; however, recombined milk may be added with materials that are similar to raw milk.

4) Food Type

(1) Milk: It refers to a product made by pasteurizing or sterilizing raw milk. (100% raw milk)

(2) Reconstituted milk: It means a milk product reconstituted to contain similar components to raw milk and pasteurized or sterilized; which contains not less than 8% non-fat milk solids.

5) Specifications

(1) Acidity (%): Not more than 0.18 (as lactic acid)

(2) Milk fat (%): Not less than 3.0 (however, 0.6~2.6 for low-fat products, not more than 0.5 for non-fat products)

(3) Bacterial count: n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5,

c=0, m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55°C or for 2 weeks at 30°C; except for products containing lactic acid bacteria.)

(4) Coliforms: n=5, c=2, m=0, M=10 (Sterilized products are excluded)

(5) Phosphatase: Shall be negative (only applicable to low-temperature long-time pasteurized and high-temperature short-time pasteurized products)

(6) *Salmonella* spp.: n=5, c=0, m=0/25 g

(7) *Listeria monocytogenes*： n=5, c=0, m=0/25 g

(8) *Staphylococcus aureus*： n=5, c=0, m=0/25 g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-2 Processed Milks

1) Definition

Processed milks refers to liquid products made by adding food or food additives to raw milk or milk products; except for those containing not less than 0.5% coffee solids.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Products shall be pasteurized or sterilized after being added with food or food additives; or added with food or food additives aseptically after being pasteurized or sterilized.

(2) When fortifying milk, fortifying agents shall be added at the appropriate time, considering heat stability and microbial contamination.

4) Food Type

(1) Fortified milk: It refers to a product made by adding food additives to milks for the purpose of fortifying with vitamins and minerals (100% milks; excluding food additives).

(2) Lactic acid bacteria-added milk: It refers to a product made by adding lactic acid bacteria to milks (100% milks; excluding lactic acid bacteria).

(3) Lactose-hydrolyzed milk: It refers to a product made by hydrolyzing or removing lactose from raw milk; or by fortifying with vitamins and minerals, and subsequently pasteurizing or sterilizing.

(4) Processed milk: It refers to processed milks made by adding food or food additives to raw milk or milk products, other than those specified in Food Type (1)~(3) above.

5) Specifications

(1) Acidity (%): Not more than 0.18 (as lactic acid; excluding Lactic acid bacteria-added milk and Processed milk)

(2) Non-fat milk solids (%): Not less than 8.0 (only applicable to Fortified milk and Lactic acid bacteria-added milk);

not less than 4.0 (only applicable to Processed milk)

(3) Milk fat (%)

Specification / Type	Fortified milk	Lactic acid bacteria-added milk	Lactose-hydrolyzed milk
Milk Fat (%)	Not less than 3.0 (However, 0.6~2.6 for low-fat products, not more than 0.5 for non-fat products)		

(4) Crude fat (%)

Specification / Type	Processed milk
Crude Fat (%)	Not less than 2.7 (However, 0.6~2.6 for low-fat products, non-fat products are excluded)

(5) Lactose (%): Not more than 1.0 (only applicable to Lactose-hydrolyzed milk)

(6) Bacterial count: n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5, c=0, m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55°C or for 2 weeks at 30°C; except for Lactic acid bacteria-added products.)

(7) Coliforms: n=5, c=2, m=0, M=10 (sterilized products are excluded)

(8) Phosphatase: Shall be negative (only applicable to low-temperature long-time pasteurized and high-temperature short-time pasteurized products; excluding Lactose-hydrolyzed milk and Processed milk)

(9) Lactic acid bacteria count: Not less than 1,000,000/1 mL (only applicable to lactic acid bacteria-added products)

(10) *Salmonella* spp.: n=5, c=0, m=0/25 g

(11) *Listeria monocytogenes*： n=5, c=0, m=0/25 g

(12) *Staphylococcus aureus*： n=5, c=0, m=0/25 g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-3 Goat Milk

1) Definition

Goat milk refers to raw milk that is obtained from goats and pasteurized or sterilized subsequently. (100% goat's raw milk)

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Specific gravity (15°C): 1.030~1.034

(2) Acidity (%): Not more than 0.20 (as lactic acid)

(3) Non-fat milk solids (%): Not less than 7.5

(4) Milk fat (%): Not less than 3.2

(5) Bacterial count: n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5, c=0, m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55°C or for 2 weeks at 30°C; except for lactic acid bacteria-added products.)

(6) Coliforms: n=5, c=2, m=0, M=10 (Sterilized products are excluded)

(7) Phosphatase: Shall be negative (only applicable to low-temperature long-time pasteurized and high-temperature short-time pasteurized products)

(8) *Salmonella* spp.: n=5, c=0, m=0/25 g

(9) *Listeria monocytogenes*： n=5, c=0, m=0/25 g

(10) *Staphylococcus aureus*： n=5, c=0, m=0/25 g

6) Test Methods

Test the sample according to "Chapter 7. General Test Methods."

18-4 Fermented Milks

1) Definition

Fermented milks refers to products made by fermenting raw milk or milk products with lactic acid bacteria or yeasts; or by adding food or food additives to such fermented milk or products.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Mixed ingredients (except for lactic acid bacteria and yeasts) shall be pasteurized or sterilized and cooled down. Then, precautions shall be taken to protect such ingredients against contamination by microorganisms other than lactic acid or yeast used as an ingredient.

(2) Lactic acid bacteria or yeasts shall be cultured or fermented while maintaining appropriate temperature s.

(3) Fermented milks may go through the freezing process.

4) Food Type

(1) Fermented milk: It refers to a product made by fermenting raw milk or milk products, or by adding food or food additives thereto; containing not less than 3% non-fat milk solids.

(2) Thick fermented milk: It refers to a product in viscous or liquid form, made by fermenting raw milk or milk products, or by adding food or food additives thereto; containing not less than 8% non-fat milk solids.

(3) Fermented cream: It refers to a product made by fermenting raw milk or milk products, or by adding food or food additives thereto; containing not less than 3% non-fat milk solids and not less than 8% milk fat.

(4) Thick fermented cream: It refers to a product made by fermenting raw milk or milk products, or by adding food or food additives thereto; containing not less than 8% non-fat milk solids and not less than 8% milk fat.

(5) Fermented butter milk: It refers to fermented butter milk containing not less than 8% non-fat milk solids.

(6) Fermented milk powder: It refers to a product made by fermenting raw milk or milk products, or by adding food or food additives thereto, and making

them into powder form; containing not less than 85% milk solids.

5) Specifications

Types / Items	Fermented Milk	Thick Fermented Milk	Fermented Cream	Thick Fermented Cream	Fermented Butter Milk	Fermented Milk Powder
(1) Water (%)	-	-	-	-	-	Not more than 5.0
(2) Milk solids (%)	-	-	-	-	-	Not less than 85
(3) Non-fat milk solids (%)	Not less than 3.0	Not less than 8.0	Not less than 3.0	Not less than 8.0	Not less than 8.0	-
(4) Milk fat (%)	-	-	Not less than 8.0	Not less than 8.0	Not more than 1.5	-
(5) Lactic acid bacteria or yeasts count	Not less than 10,000,000/1 mL	Not less than 100,000,000/ 1 mL (however, for frozen products, not less than 10,000,000)	Not less than 10,000,000/ 1 mL	Not less than 100,000,000/ 1 mL (however, for frozen products, not less than 10,000,000)	Not less than 10,000,000 /1 mL	-
(6) Coliforms	n=5, c=2, m=<3, M=10					
(7) *Salmonella* spp.	n=5, c=0, m=0/25 g					
(8) *Listeria monocytogenes*	n=5, c=0, m=0/25 g					
(9) *Staphylococcus aureus*	n=5, c=0, m=0/25 g					

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-5 Butter Milk

1) Definition

Butter milk refers to a product made by pasteurizing or sterilizing the remains that are left after butter is manufactured from milk cream, or such butter milk made into powder form (100% raw butter milk).

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Food additives shall not be used in processing butter milk.

4) Food Type

5) Specifications

(1) Water: Not more than 5.0 (only applicable to powder products)

(2) Milk solids (%): Not less than 6.5 (not less than 95.0 for powder products)

(3) Bacterial count: n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5, c=0, m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55°C or for 2 weeks at 30°C.)

(4) Coliforms: n=5, c=2, m=<3, M=10 (Sterilized products are excluded)

(5) *Salmonella* spp.: n=5, c=0, m=0/25 g

(6) *Listeria monocytogenes*： n=5, c=0, m=0/25 g

(7) *Staphylococcus aureus*： n=5, c=0, m=0/25 g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-6 Concentrated Milks

1) Definition

Concentrated milks refers to products made by concentrating raw milk or milks with or without the addition of food or food additives.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) When used to prevent precipitation, lactose shall be in fine powder form and treated to prevent microbial contamination.

(2) Other materials shall never be added to concentrated milk. However, saccharides (sugar, glucose, fructose and oligosaccharides) may be added to Sweetened condensed milk and Sweetened condensed skim milk; and food or food additives may be added to Processed condensed milk.

4) Food Type

(1) Concentrated milk: It refers to a product made by concentrating raw milk as it is.

(2) Defatted concentrated milk: It refers to a product made by concentrating raw milk after adjusting its milk fat content to 0.5% or less.

(3) Sweetened condensed milk: It refers to a product made by concentrating raw milk after adding saccharides thereto.

(4) Sweetened condensed skim milk: It refers to a product made by concentrating raw milk after adjusting its milk fat content to 0.5% or less and then adding sugars thereto.

(5) Processed condensed milk: It refers to a product made by concentrating raw milk or milks after adding food or food additives thereto.

5) Specifications

Types / Items	Concentrated Milk, Concentrated skim milk	Sweetened condensed milk	Sweetened condensed skim milk	Processed condensed milk
(1) Water(%)	-	Not more than 27.0	Not more than 29.0	-
(2) Milk solids (%)	Not less than 22.0	Not less than 29.0	Not less than 25.0	Not less than 22.0

(3) Milk fat (%)	Not less than 6.0 (only applicable to concentrated milk)	Not less than 8.0	-	-
(4) Acidity (%)	Not more than 0.4 (based on lactic acid; only applicable to concentrated milk)	-	-	-
(5) Sugars (including lactose, %)	-	Not more than 58.0	Not more than 58.0	Not more than 58.0
(6) Bacterial count	n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5, c=0, m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55℃ or for 2 weeks at 30℃.)	n=5, c=2, m=10,000, M=50,000	n=5, c=2, m=10,000, M=50,000	n=5, c=2, m=10,000, M=50,000
(7) Coliforms	n=5, c=2, m=<3, M=10 (Sterilized products are excluded)	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10
(8) *Salmonella* spp.	n=5, c=0, m=0/25g			
(9) *Listeria monocytogenes*	n=5, c=0, m=0/25g			
(10) *Staphylococcus aureus*	n=5, c=0, m=0/25g			

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-7 Milk Creams

1) Definition

Milk creams refers to milk fat separated from raw milk or milks, with or without the addition of food or food additives.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Milk creams shall be pasteurized or sterilized; they shall be processed using low-temperature long-time pasteurization (for 30 minutes at 65~68°C); high-temperature short-time pasteurization (for 15 to 20 seconds at 74~76°C); ultra-high-temperature sterilization (for 0.5 to 5 seconds at 130~150°C); or other methods with equivalent or better effect.

(2) Other food or food additives shall not be added to milk cream.

4) Food Type

(1) Milk cream: It refers to milk fat separated from raw milk or milks, containing not less than 30% milk fat content.

(2) Processed milk cream: It refers to a product made by adding food or food additives to milk cream and processing it, containing not less than 18% milk fat content (notless than 50% for powder products).

5) Specifications

Types / Items	Milk Cream	Processed Milk Cream
(1) Properties and Conditions	Homogenized milky-white~yellow fluid liquid or semi-solid products without off-taste or flavor	Shall have unique color, gloss and flavor without off-taste/flavor
(2) Water (%)	-	Not more than 5.0 (only applicable to powder products)
(3) Acidity (%)	Not more than 0.20 (as lactic acid)	-
(4) Milk fat (%)	Not less than 30.0	Not less than 18.0 (for powder products, not less than 50.0)
(5) Bacterial count	n=5, c=2, m=10,000, M=50,000	n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5, c=0,

		m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55℃ or for 2 weeks at 30℃.)
(5) Coliforms	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10 (sterilized products are excluded)
(6) *Salmonella* spp.	n=5, c=0, m=0/25 g	
(7) *Listeria monocytogenes*	n=5, c=0, m=0/25 g	
(8) *Staphylococcus aureus*	n=5, c=0, m=0/25 g	

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-8 Butters

1) Definition

Butters refers to products made by separating or fermenting milk fat from raw milk or milks, and processing it, such as by churning or working, etc. with or without the addition of food or food additives.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Precautions shall be taken to prevent contamination by microorganisms of different species when manufacturing fermented butter.

(2) Milk fat content in processed butter shall make up not less than 50% of the fat content of the product by weight.

4) Food Type

(1) Butter: It refers to a product made by separating or fermenting milk fat from raw milk or milks; and churning and working such milk fat, (including those added with edible salt or food colors).

(2) Processed butter: It refers to a product made by adding food or food additives to butter during or after completing manufacturing/processing; and processing it, such as by churning or working, etc.

(3) Butter oil: It refers to a product made by removing water and non-fat milk solids from butter or milk cream.

5) Specifications

Types / Items	Butter	Processed Butter	Butter Oil
(1) Water (%)	Not more than 18.0	Not more than 18.0	Not more than 0.3
(2) Milk fat (%)	Not less than 80.0	Not less than 30.0	Not less than 99.6
(3) Acid value	Not more than 2.8 (except fermented products)	Not more than 2.8 (except fermented products)	Not more than 2.8
(4) Butyric acid value	20.0±2	-	20.0±2
(5) Tar colors	Not detected.		
(6) Coliforms	n=5, c=2, m=<3, M=10		
(7) *Salmonella*	n=5, c=0, m=0/25g		

spp.	
(8) *Listeria monocytogenes*	n=5, c=0, m=0/25g
(9) *Staphylococcus aureus*	n=5, c=0, m=0/25g
(10) Antioxidant(g/kg): No antioxidants shall be detected except for the following:	
Butylated hydroxyanisole(BHA); Dibutyl hydroxy toluene; Tert-butylhydroquinone	Not more than 0.2 (When used in combination, the sum of butylated hydroxyanisole (BHA), dibutyl hydroxy toluene and tert-butylhydroquinone shall not be more than 0.2)
Propyl gallate	Not more than 0.1
(11) Preservatives(g/kg): No preservatives shall be detected except for the following.	
Sodium dehydroacetic acid	Not more than 0.5 (as dehydroacetic acid)

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-9 Cheeses

1) Definition

Cheeses refers to natural cheese and processed cheese manufactured/processed by adding lactic acid bacteria, milk-clotting enzyme and organic acids, etc. to raw milk or milk products; and processing such milk or products, such as by coagulation, heating, concentration, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Raw milk and milk products for cheese-making shall be pasteurized for 30 minutes at 63~65°C and for not less than 15 seconds at 72~75°C or using other methods with equivalent or better effect; provided, however, that those for cheese-making that are aged for not less than 60 days at 2°C or above may not be subject to the pasteurization condition, such as the temperature set forth above.

(2) During inoculation of lactic acid bacteria, precautions shall be taken to prevent secondary contamination by microorganisms of different species.

(3) During fermentation or aging, the temperature and humidity of the aging room shall be strictly managed in order to prevent contamination on the surface by harmful microorganisms.

(4) Natural cheese used as an ingredient in processed cheese shall be ground and sufficiently churned and emulsified to make a uniform texture.

4) Food Type

(1) Natural cheese: It refers to a product manufactured by adding lactic acid bacteria, milk-clotting enzyme and organic acids, etc. to raw milk or milk products to coagulate; and removing whey therefrom. It also includes cheese made by concentrating or heat-coagulating whey with/without the addition of raw milk or milk products, etc.

(2) Processed cheese: It refers to a product made by adding milk products, other food or food additives to natural cheese used as an ingredient, and processing such cheese with or without emulsification; which contains not less than 18% milk solids derived from natural cheese.

5) Specifications

Item \ Type	Natural cheese	Processed cheese
(1) *Escherichia coli*	n=5, c=1, m=10, M=100	-
(2) Coliforms	-	n=5, c=2, m=10, M=100
(3) *Salmonella* spp.	n=5, c=0, m=0/25g	
(4) *Listeria monocytogenes*	n=5, c=0, m=0/25g	
(5) *Staphylococcus aureus*	n=5, c=2, m=10, M=100	
(6) *Clostridium perfringens*	n=5, c=2, m=10, M=100 (only applicable to cheese made from unpasteurized raw milk)	
(7) Enterohemorrhagic *Escherichia coli*	n=5, c=0, m=0/25 g (only applicable to cheese made from unpasteurized raw milk)	
(8) Preservatives (g/kg) : No preservatives shall be detected except for the following.		
Sodium dehydroacetic acid	Not more than 0.5 (as dehydroacetic acid)	
Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 3.0 (based on sorbic acid. When used in combination with calcium propionate, or sodium propionate, the sum of sorbic acid and propionic acid shall be not more than 3.0)	
Propionic acid; Calcium propionate; Sodium propionate	Not more than 3.0 (based on propionic acid. When used in combination with sorbic acid, potassium sorbate, or calcium sorbate, the sum of propionic acid and sorbic acid shall be not more than 3.0)	

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-10 Powdered Milks

1) Definition

Powdered Milks refers to products in powder form made by processing raw milk or skim milk with or without the addition of food or food additives.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Other food or food additives shall never be added to powdered milks, other than mixed milk powder; provided, however, saccharides (sugar, fructose, glucose and oligosaccharides) may be added to Sweetened milk powder.

4) Food Type

(1) Whole milk powder

It refers to a product made by removing water from raw milk and processing it into powder (100% raw milk).

(2) Skim milk powder

It refers to a product made by removing water from skim milk (containing not more than 0.5% milk fat) and processing it into powder (100% skim milk).

(3) Sweetened milk powder

It refers to a product made by adding saccharides (sugar, fructose, glucose and oligosaccharides) and processing it into powder (100% raw milk, excluding the saccharides added).

(4) Mixed milk powder

It refers to a powder product made by adding food or food additives, such as grain flour, processed grain products, processed cocoa products, whey and whey powder, etc., to raw milk, whole milk powder, skim milk or skim milk powder; and processing it; which contains not less than 50% raw milk, whole milk powder, skim milk or skim milk powder (as milk solids).

5) Specifications

Item \ Type	Whole Milk Powder	Skim Milk Powder	Sweetened Milk Powder	Mixed milk powder
(1) Water (%)	Not more than 5.0			
(2) Milk solids (%)	Not less than 95.0	Not less than 95.0	Not less than 70.0	Not less than 50.0
(3) Milk fat (%)	Not less than 25.0	Not more than 1.3	Not less than 18.0	Not less than 12.5 (except for products made from nonfat dry milk)
(4) Saccharide content (%, except lactose)	-	-	Not more than 25.0	-
(5) Bacterial count	n=5, c=2, m=10,000, M=50,000			
(6) Coliforms	n = 5, c = 2, m =< 3, M = 10			
(7) *Salmonella* spp.	n=5, c=0, m=0/25 g			
(8) *Listeria monocytogenes*	n=5, c=0, m=0/25 g			

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-11 Wheys

1) Definition

Wheys refers to products made by producing raw whey through fermentation of raw milk and milk with lactic acid bacteria or through addition of enzymes or acids; and subsequently pasteurizing/sterilizing such raw whey or concentrating or making it into powder with or without desalination/defatting, etc. (100% raw whey)

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Powder products shall be processed to contain not more than 5.0% water.

4) Food Type

(1) Whey: It refers to a product made by pasteurizing or sterilizing raw whey.

(2) Concentrated whey: It refers to a product made by concentrating raw whey.

(3) Whey protein powder: It refers to a product made by removing lactose or minerals, etc. from raw whey and processing it into powder.

5) Specifications

Item \ Type	Whey	Concentrate whey	Whey protein powder
(1) Milk solids (%)	Not less than 5.0 (not less than 95.0 for powder products)	Not less than 25.0	Not less than 95.0 (Milk proteins shall not be less than 35.0% of the milk solids.)
(2) Bacterial count	n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5, c=0, m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55℃ or for 2 weeks at 30℃.)	n=5, c=2, m=10,000, M=50,000 (for sterilized products, n=5, c=0, m=0, when tested according to the general bacterial counting method after being stored for 1 week at 55℃ or for 2 weeks at 30℃.)	n=5, c=2, m=10,000, M=50,000
(3) Coliforms	n=5, c=2, m=<3, M=10		n=5, c=2, m=<3,

Item \ Type	Whey	Concentrate whey	Whey protein powder
	(sterilized products are excluded)		M=10
(4) *Salmonella* spp.	n=5, c=0, m=0/25g		
(5) *Listeria monocytogenes*	n=5, c=0, m=0/25g		

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-12 Lactose

1) Definition

Lactose refers to a product made by separating carbohydrates from skim milk or whey and processing them into powder. (100% raw milk or milk product)

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Components other than carbohydrates shall be sufficiently removed by heating at high temperature or adding coagulants.

(2) Salts shall be removed, to the extent possible, from lactose through ion exchange process, etc., before it is processed into powder.

4) Food Type

5) Specifications

(1) Water (%): Not more than 5.0

(2) Lactose (%): Not less than 95.0

(3) Bacterial count: n=5, c=2, m=10,000, M=50,000

(4) Coliforms: n=5, c=2, m=<3, M=10

(5) *Salmonella* spp.: n=5, c=0, m=0/25 g

(6) *Listeria monocytogenes*： n=5, c=0, m=0/25 g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

18-13 Hydrolyzed Milk Protein Products

1) Definition

Hydrolyzed milk protein Products refers to products made by processing milk proteins after enzymatic or acid hydrolysis; or by adding food or food additives thereto.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) In the case of acid hydrolysis, acid shall be removed or neutralized after use.

(2) Only hydrochloric acid shall be used for acid hydrolysis.

(3) Finished products shall be properly pasteurized or sterilized before completion.

4) Food Type

5) Specifications

(1) Water (%) : Not more than 5.0

(2) Crude protein (%) : Not less than the indicated amount.

(3) Amino acid nitrogen (%) : Not less than the indicated amount.

(4) Casein phosphopeptide (C.P.P) (%) : Not less than the indicated amount (only applicable to products containing 100% hydrolyzed milk protein).

(5) Bacterial count : n=5, c=2, m=10,000, M=50,000

(6) Coliforms : n=5, c=2, m=<3, M=10

(7) *Salmonella* spp. : n=5, c=0, m=0/25 g

(8) *Listeria monocytogenes* : n=5, c=0, m=0/25 g

6) Test Methods

Test the sample according to “Chapter 7. General Test Methods.”

19. Processed Fishery Foods

Processed fishery foods refers to products manufactured/processed through a process of grinding or drying, etc., using fishery products as main ingredients, or by adding food or food additives to such products; including processed fish meat products, salted and fermented seafood products, dried fish/shellfish fillet products and seasoned laver, etc.

19-1 Processed Fish Meat Products

1) Definition

Processed fish products refers to products manufactured/processed by adding food or food additives to fish meat used as a main ingredient; and includes Fish flesh, Surimi, Semi-finished fish meat product, Fish paste and Fish sausage, etc.

2) Requirements for Ingredients, etc.

(1) Ingredients shall be fresh in quality.

(2) Fishes shall be stored/managed in a sanitary manner at 5°C or below; frozen surimi, at -18°C or below.

(3) Ingredients shall be handled in a sanitary manner after removing inedible parts.

3) Manufacturing/Processing Standards

(1) Raw fish meat (except for frozen surimi) shall be sufficiently washed with running water fit for human consumption to remove blood, fat and water soluble protein, etc.

(2) All products for distribution/sale shall be packaged and hermetically sealed.

(3) Fats and oils used in oil-frying/oil-treatment shall have an acid value of 2.5 or less and peroxide value of 50 or less.

4) Food Type

(1) Fish flesh

Fish flesh refers to a product made by collecting and processing the flesh of

fishes, without the addition of food additives, such as excipients and preservatives (except sorbic acid and potassium sorbate), etc.

(2) Surimi

It refers to a product made by adding salt, saccharides and phosphate, etc., to fish flesh collected/processed from the flesh of fishes.

(3) Semi-finished fish meat product

It refers to a product made, without heat treatment, by adding food or food additives to fish meat paste from which salt-soluble proteins are eluted.

(4) Fish paste

It refers to products manufactured/processed by adding food or food additives to fish meat paste from which salt-soluble proteins are eluted.

(5) Fish sausage

It refers to products made by salting and smoking fish meat or fish meat and other meat; or by stuffing fish meat or fish meat and other meat, etc., into casings and heating them; (provided, however, that fish meat content shall be more than other meat content).

(6) Other processed fish meat products

It refers to processed fish meat products other than those specified in Food Type (1)~(5) above.

5) Specifications

(1) Nitrite ion (g/kg)： Less than 0.05 (only applicable to fish sausages)

(2) Tar colors： Shall not be detected (except for fish sausages)

(3) Coliforms：n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(4) Bacterial count：n=5, c=0, m=0 (only applicable to sterilized products)

(5) Preservatives (g/kg)：No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 2.0 (as sorbic acid)

6) Test Methods

(1) Nitrite ion

Test the sample according to “Chapter 7. General Test Methods, 3.6 Color Fixatives.”

(2) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

19-2 Salted and Fermented Seafood Products

1) Definition

Salted and fermented seafood products refers to products made by adding salt to fishes, crustaceans, mollusks or echinoderms, etc., and fermenting and aging them; or by adding food or food additives to the filtrate separated from such fermented and aged foods and processing them. It includes *jeotkal* (salted and fermented seafood), seasoned *jeotkal* (salted-fermented-and-seasoned seafood), fish sauce and seasoned fish sauce.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Water (including saline solution) may not be added to increase the weight; (except for seasoned fish sauce).

(2) When manufactured, *chang-nan-jeot* (salt-fermented pollack tripe) must be scrubbed, washed and inspected for foreign matters using light.

(3) Tools and utensils shall be handled in a sanitary manner to prevent rust and made of anti-corrosive materials, if possible.

4) Food Type

(1) *Jeotkal* (Salted and fermented seafood)

It refers to a product by adding salt (for *sikhae* (fermented fishes with grains), by adding salt and grains, etc.) to the whole or part of fishes, crustaceans, mollusks or echinoderms, etc., (which shall account for not less than 60% based on a fresh weight) and fermenting and aging them.

(2) Seasoned *jeoktal* (Salted-fermented-and-seasoned seafood)

It refers to *jeoktal* seasoned by adding hot pepper powder and seasonings, etc.

(3) Fish sauce

It refers to a liquid filtered or separated from *jeoktal*; or a mixture made by mixing the liquid obtained from re-fermented or aged residue, with the previously filtered or separated liquid.

(4) Seasoned fish sauce

It refers to a product made by adding salt water or seasonings, etc., to fish

sauce.

5) Specifications

(1) Total nitrogen (%) : Not less than 1.0 for Fish sauce (however, for salt-fermented mysidacea (*Neomysis japonica*) sauce, not less than 0.8); not less than 0.5 for seasoned fish sauce

(2) Coliforms : n=5, c=1, m=0, M=10 (only applicable to Fish sauce and Seasoned fish sauce)

(3) Tar colors : Shall not be detected (except for *myeongnan-jeot* (salted-fermented Alaska pollack roe)).

(4) Preservatives (g/kg) : No preservatives shall be detected except for the following: (only applicable to products containing not more than 8% salt content).

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (as sorbic acid)

(5) *Escherichia coli* : n=5, c=1, m=0, M=10 (except for Fish sauce and Seasoned fish sauce)

6) Test Methods

(1) Total nitrogen

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(4) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(5) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

19-3 Dried Fish/Shellfish Fillet Products

1) Definition

Dried fish/Shellfish fillet products refers to products made by drying fishery products, such as fishes or mollusks, etc., or by processing such dried products with seasonings, etc.; including seasoned dried fish/shellfish fillet and dried fish/shellfish fillet, etc.

2) Requirements for Ingredients, etc.

(1) Raw ingredients shall be preserved at 5°C or below.

(2) Raw ingredients shall not contain natural toxins at the level that is harmful to the human body.

3) Manufacturing/Processing Standards

(1) Products shall be pasteurized or sterilized as necessary, and packaged in a sanitary manner.

4) Food Type

(1) Seasoned dried fish/shellfish fillet

It refers to products made by processing fishes or mollusks, etc., such as seasoning or drying, etc.

(2) Dried fish/shellfish fillet

It refers to products made by drying fishes or mollusks, etc., or by cutting such dried products.

(3) Other dried fish/shellfish fillet

It means those not specified in Food Type (1)~(2) above.

5) Specifications

(1) Sulfur dioxide (g/kg) : Less than 0.030

(2) *Escherichia coli* : n=5, c=2, m=0, M=10

(3) *Staphylococcus aureus* : n=5, c=1, m=10, M=100 (only applicable to Seasoned dried fish/shellfish fillet)

(4) Preservatives (g/kg): No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (as sorbic acid)

6) Test Methods

(1) Sulfur dioxide

Test the sample according to “Chapter 7. General Test Methods, 3.5 Sulfurous Acid, Sodium Hydrosulfite and Its Salts.”

(2) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(3) *Staphylococcus aureus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.12 *Staphylococcus aureus*, 4.12.2 Quantitative Test.”

(4) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

19-4 Seasoned Laver

1) Definition

Seasoned laver refers to a product made by roasting dried laver (including semi-roasted laver) or by seasoning/processing it with edible fats and oils, seasonings and edible salt, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Acid value : Not more than 4.0 (only applicable to oil-treated laver)

(2) Peroxide value : Not more than 60.0 (only applicable to oil-treated laver)

(3) Tar colors : Shall not be detected.

6) Test Methods

(1) Acid value

Test the sample according to “1. Confectioneries, Breads or Rice Cakes, 6) Test Methods, (2) Acid Value.”

(2) Peroxide value

Precisely measure 1~5 g of fat and oil extracted for “(1) Acid value” and test it according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.5 Peroxide Value.”

(3) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

19-5 Agar

1) Definition

It refers to a dried product made by freezing-dehydration or pressing-dehydration of gelidium jelly.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Properties and Conditions: Acceptable

(2) Water (%): Not more than 22.0

(3) Crude protein (%): Not more than 3.0

(4) Crude ash (%): Not more than 6.0

(5) Hot-water-insoluble residues (%): Not more than 4.0

(6) Boric acid (%): Not more than 0.10

6) Test Methods

(1) Appearance (organoleptic tests): Evenness and uniformity (齊整度)

Score	Long agar strips (*Sil*); Short agar strips (*San*); Agar flakes (*Suhl*)	Agar powder; *In-sang* agar; and Other agars
5 point	None of them are quick frozen; warm dried; air dried; or mixed with earthy materials.	Uniform shape and quality
4 point	Only a very small amount is quick frozen; warm dried; air dried; or mixed with earthy materials. Depending on the amount, 4 or 3 points are given.	Mostly uniform shape and quality; depending on the degree of uniformity, 4 or 3 points are given
3 point		
2 point	A small amount is quick frozen; warm dried; air dried; or mixed with earthy materials	Slightly non-uniform shape and quality
1 point	A large amount is quick frozen; warm dried; air dried; or mixed with earthy materials.	Non-uniform shape and quality

(2) Water

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.11.1.1

Water.”

(3) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(4) Crude ash

Precisely measure 1~2 g of sample and test it according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash.”

(5) Hot-water-insoluble residues

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.11.1.2 Hot-Water-Insoluble Residues.”

(6) Boric acid

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.11.1.3 Boric Acid.”

19-6 Other Processed Fishery Products

1) Definition

Other processed fishery products refers to products processed using fishery products as a main ingredient. However, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Properties and Conditions: Acceptable

(2) Foreign matters: Acceptable

(3) Acid value: Not more than 5.0 (only applicable to oil-fried/oil-treated foods)

(4) Peroxide value: Not more than 60 (only applicable to oil-fried/oil-treated foods)

(5) Coliforms：n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(6) Bacterial count： n=5, c=0, m=0 (only applicable to sterilized products)

(7) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products for direct consumption without further processing or heating)

6) Test Methods

(1) Properties and Conditions

Test the sample according to “Chapter 7. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign Matters

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matters.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

20. Processed Animal Food Products

Processed animal food products refers to foods processed using meat, eggs or ingredients of animal origin, as a main ingredient, derived from animals other than livestock specified under the “Livestock Products Sanitary Control Act,” and includes other meat or egg products, insect products, soft-shelled turtle products and processed extract products, etc .However, those for which separate Standards and Specifications have been established are excluded.

20-1 Other Meat or Other Egg Products

1) Definition

Other meat or other egg products refers to products processed using meat, eggs or edible parts of animals fit for human consumption, as a main ingredient, derived from animals other than livestock specified under the “Livestock Products Sanitary Control Act.”

2) Requirements for Ingredients, etc.

(1) Animals other than livestock shall meet the slaughter and butchering method and inspection standards as set forth in the “Livestock Products Sanitary Control Act”

3) Manufacturing/Processing Standards

4) Food Type

(1) Other meat or other egg

It refers to eggs, carcass, dressed meat, internal organs or other edible parts of animals produced for human consumption.

(2) Other processed animal food product

It refers to products processed using meat, eggs or edible parts of animals produced for human consumption, as a main ingredient.

5) Specifications

(1) Nitrite ion (g/kg) : Less than 0.07 (only applicable to products containing other meats)

(2) Volatile basic nitrogen (mg%): Not more than 20 (only applicable to products with 100% other meats)

(3) Tar colors: Shall not be detected (only applicable to products containing other meats).

(4) Coliforms: n=5, c=2, m=10, M=100 (only applicable to pasteurized products)

(5) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products)

(6) *Salmonella* spp.: n=5, c=0, m=0/25 g (only applicable to pasteurized products)

(7) Enterohemorrhagic *Escherichia coli*: n=5, c=0, m=0/25 g (only applicable to ground meat ingredient)

(8) Preservatives (g/kg)： No preservatives shall be detected except for the following:

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 2.0 〔as sorbic acid; only applicable to products containing meat〕

6) Test Methods

(1) Nitrite ion

Test the sample according to “Chapter 7. General Test Methods, 3.6 Color Fixatives.”

(2) Volatile basic nitrogen

Test the sample according to “Chapter 7. General Test Methods, 6.9.4.1 Volatile Basic Nitrogen.”

(3) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(4) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(5) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(6) *Salmonella* spp.

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

(7) Enterohemorrhagic *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.16 Enterohemorrhagic *Escherichia coli*.”

(8) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

20-2 Insect Products

1) Definition

Insect products refers to products made by processing edible insects, such as by drying and making them into powder, etc. with or without the addition of food or food additives.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Acid value : Not more than 5.0 (only applicable to edible silkworm pupae products)

(2) Peroxide value : Not more than 60 (only applicable to edible silkworm pupae products)

(3) Coliforms : n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(4) Bacterial count : n=5, c=0, m=0 (only applicable to sterilized products)

(5) *Escherichia coli* : n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products for direct consumption without further processing or heating)

6) Test Methods

(1) Acid value

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.3.1 Acid Value.”

(2) Peroxide value

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.3.5 Peroxide Value.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

20-3 Soft-shelled Turtle Products

1) Definition

Soft-shelled turtle products refers to foods produced by processing soft-shelled turtles farmed for human consumption.

2) Requirements for Ingredients, etc.

(1) Soft-shelled turtles shall be farmed in a sanitary manner for human consumption and of good quality without spoilage.

3) Manufacturing/Processing Standards

4) Food Type

(1) Soft-shelled turtle powder

It refers to a product made into powder by drying edible parts of soft-shelled turtles.

(2) Soft-shelled turtle powder product

It refers to products manufactured/processed using soft-shelled turtle powder as a main ingredient (not less than 30.0%).

(3) Soft-shelled turtle oil product

It refers to turtle oil extracted from soft-shelled turtles or products manufactured/processed using such oil as a main ingredient (not less than 98.0%).

5) Specifications

Type / Item	Soft-Shelled Turtle Powder	Soft-Shelled Turtle Powder Product	Soft-Shelled Turtle Oil Product
(1) Water (%)	Not more than 5.0	Not more than 10.0	-
(2) Ash (%)	16.0~40.0	Not less than 4.8	-
(3) Crude protein (%)	48.0~70.0	Not less than 14.0	-
(4) Hydroxyproline (%)	Not less than 1.0	Not less than 0.3	-
(5) Crude fat (%)	-	-	Not less than 95.0
(6) Acid value	-	-	Not more than 1.0
(7) Peroxide value	-	-	Not more than 15.0
(8) Palmitoleic acid(%)	-	-	8.0~18.0
(9) Arachidonic acid + eicosapentaenoic acid (%)	-	-	2.0~8.0
(10) Coliforms	n=5, c=2, m=0, M=10		

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) Ash

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.2 Ash.”

(3) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.3 Nitrogenous Compounds, 2.1.3.1 Total Nitrogen and Crude Protein.”

(4) Hydroxyproline

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.3 Nitrogenous Compounds, 2.1.3.3 Amino Acid.”

(5) Crude fat

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.5 Lipid, 2.1.5.1 Crude Fat.”

(6) Acid value

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.5 Lipid, 2.1.5.3 Chemical Test, 2.1.5.3.1 Acid Value.”

(7) Peroxide value

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.5 Lipid, 2.1.5.3 Chemical Test, 2.1.5.3.5 Peroxide Value.”

(8) Palmitoleic acid

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.5 Lipid, 2.1.5.4 Fatty Acid.” However, palmitoleic acid shall be used for standard

products.

(9) Arachidonic acid+eicosapentaenoic acid

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.5 Lipid, 2.1.5.4 Fatty Acid.” However, arachidonic acid shall be added for testing standard products.

(10) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

20-4 Processed Extract Product

1) Definition

Processed extract product refers to products made by extracting edible animal materials as a main ingredient using water; or by adding food or food additives to such extract and processing it. However, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Tar colors : Shall not be detected

(2) Bacterial count : n=5, c=1, m=100, M=1,000 (only applicable to liquid products for direct consumption)

(3) Coliforms : n=5, c=1, m=0, M=10 (only applicable to pasteurized products; or liquid products for direct consumption)

(4) *Escherichia coli* : n=5, c=1, m=0, M=10 (except for pasteurized products, and liquid products for direct consumption)

6) Test Methods

(1) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(2) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

21. Honey and Pollen Products

Honey and pollen products refers to natural products collected by honey bees and stored in honeycombs, or products processed from such natural products; such as Honeys, Royal jellies and Processed pollen foods, etc.

21-1 Honeys

1) Definition

Honeys refers to natural products, such as nectar and sap, etc., collected and stored into honeycombs by honey bees; or those extracted from such honeycombs.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Other food or food additives shall not be added, such as pollen, royal jelly, sugars or sweeteners,

4) Food Type

(1) Honeycomb honey

It refers to a natural product, such as nectar and sap, etc., collected and stored by honey bees into honeycombs, then entire or part of which is subsequently sealed; or such natural product added with honey, which maintains the original shape of honeycombs.

(2) Honey

It refers to a natural product, such as nectar and sap, etc., collected and stored into honeycombs by honey bees, and extracted and ripened subsequently.

(3) Sugar-fed honeycomb honey

It refers to honeycomb honey obtained from bees fed with sugar; or added with honey or sugar-fed honey thereto, which maintains the original shape of honeycombs.

(4) Sugar-fed honey

It refers to a product obtained from bees fed with sugar, and extracted and

ripened subsequently.

5) Specifications

Item \ Type	Honeycomb Honey	Honey	Sugar-Fed honeycomb Honey	Sugar-Fed Honey
(1) Water (%)	Not more than 23.0	Not more than 20.0	Not more than 23.0	Not more than 20.0
(2) Water insoluble solids (%)	-	Not more than 0.5	-	Not more than 0.5
(3) Acidity (meq/kg)	-	Not more than 40.0	-	Not more than 40.0
(4) Invert sugar (%)	Not less than 50.0	Not less than 60.0	Not less than 50.0	Not less than 60.0
(5) Sucrose (%)	Not more than 15.0	Not more than 7.0	Not more than 15.0	Not more than 7.0
(6) Hydroxymethyl furfural (mg/kg)	Not more than 80.0			
(7) Tar colors	-	Shall not be detected.	-	Shall not be detected.
(8) Sodium saccharin	-	Shall not be detected.	-	Shall not be detected.
(9) Isomerized sugar	-	Shall be negative	-	Shall be negative
(10) Carbon-isotope ratio (‰)	Not more than -22.5‰	Not more than -22.5‰	More than -22.5‰	More than -22.5‰

6) Test Methods

(1) Samples

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.1 Samples.”

(2) Water

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.2 Water.”

(3) Water insoluble solids

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.3 Water Insoluble Solids.”

(4) Acidity

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.4 Acidity.”

(5) Invert sugar and sucrose

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.5 Invert Sugar and Sucrose.”

(6) Hydroxymethyl furfural

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.6 Hydroxymethyl Furfural.”

(7) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color Additives.”

(8) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2.1 Sodium saccharin.”

(9) Isomerized sugar

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.7 Isomerized Sugar”

(10) Carbon-isotope ratio

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.1 Honeys, 6.12.1.8 Carbon-Isotope Ratio.”

21-2 Royal Jellies

1) Definition

Royal jellies refer to products obtained with or without processing secretions from the pharyngeal gland of worker bees.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) In case of manufacturing Royal jelly products, not less than 35.0% of fresh royal jelly or not less than 14.0% of freeze-dried royal jelly shall be used.

4) Food Type

(1) Royal jelly

It refers to a product obtained by removing foreign matters from royal jelly, which is a secretion from the pharyngeal gland of worker bees, in order to make it fit for human consumption; or by drying such royal jelly.

(2) Royal jelly product

It refers to products manufactured/processed from royal jelly.

5) Specifications

Type / Item	Royal jelly	Royal jelly products
(1) 10-hydroxy-2-decenoic acid (%)	Not less than 1.6 (Not less than 4.0 for dried products)	Not less than 0.56
(2) Water (%)	65.5~68.5 (Not more than 5.0 for dried products)	-
(3) Crude protein (%)	11.0~14.5 (30.0~41.0 for dried products)	-
(4) Acidity (1N NaOH mL/100g)	32~53 (except for dried products)	-
(5) *Escherichia coli*	n=5, c=1, m=0, M=10	

6) Test Methods

(1) 10- hydroxy-2- decenoic acid (10-HDA)

Test the sample according to “Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.2 Royal

Jellies, 6.12.2.1 10-Hydroxy-2-Decenoic Acid (10-HDA)."

(2) Water

Test the sample according to "Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.2 Royal Jellies, 6.12.2.2 Water."

(3) Crude protein

Test the sample according to "Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.3 Nitrogenous Compounds, 2.1.3.1 Total Nitrogen and Crude Protein."

(4) Acidity

Test the sample according to "Chapter 7. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.12.2 Royal Jellies, 6.12.2.3 Acidity."

(5) *Escherichia coli*

Test the sample according to "Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia Coli*."

21-3 Processed Pollen Foods

1) Definition

Processed polllen foods refers to foods made by shell-cracking, extraction, concentration and refining, etc., of pollens; or by processing such pollens.

2) Requirements for Ingredients, etc.

(1) Raw pollens shall be collected by honey bees or by other methods and be free of foreign materials.

3) Manufacturing/Processing Standards

4) Food Type

(1) Processed pollen

It refers to products made by removing foreign materials from pollens collected artificially or by honey bees and cracking their shells; or such pollens concentrated or made into powder after being treated with enzymes and extracted.

(2) Pollen-containing product

It refers to products manufactured/processed using pollens (not less than 30.0%) or pollen extracts (not less than 10.0% as solid content) as a main ingredient.

5) Specifications

Type / Item	Processed pollen	Pollen-containing product
(1) Water (%)	Not more than 8.0 (except for liquid products)	Not more than 10.0 (except for liquid products)
(2) Crude protein (%)	Not less than 18.0 (calculated on dry matter)	Not less than 2.0
(3) Tar colors	Shall not be deteted	
(4) *Escherichia coli*	n=5, c=1, m=0, M=10	

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) Crude protein

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.3 Nitrogenous Compounds, 2.1.3.1 Total Nitrogen and Crude Protein.”

(3) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3. Test Methods for Food Additives in Food, 3.4 Color Additives.”

(4) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli.*”

22. Prepared Meals

Prepared meals refers to foods suitable for direct consumption or to be consumed after simple cooking process, such as heating, etc., and raw foods, dumpling and ready-to-eat/convenience foods, etc. However, those for which separate Standards and Specifications have been established are excluded.

22-1 Raw Foods

1) Definition

Raw foods refers to products made by processing, such as drying, etc., ingredients of animal/plant origin as a main ingredient, and intended to be consumed with or without mixing with water. However, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Ingredients of Raw foods shall be dried in a manner that minimizes the destruction of nutrients, inactivation of enzymes and starch gelatinization, etc.

(2) During grinding process, foreign matter, such as iron powder, etc., shall not be mixed in; and destruction of nutrients due to frictional heat shall be minimized.

4) Food Type

(1) Raw food product

It refers to products formulated to contain not less than 80% raw food ingredients, which are of animal/plant origin and dried in a manner that minimizes the destruction of nutrients, inactivation of enzymes and starch gelatinization, etc.

(2) Raw food-containing product

It refers to products formulated to contain not less than 50% raw food ingredients, which are of animal/plant origin and dried in a manner that minimizes the destruction of nutrients, inactivation of enzymes and starch gelatinization, etc.

5) Specifications

(1) Water (%): Not more than 8.0 (except for paste, liquid and gel products)

(2) *Clostridium perfringens*: Not more than 100/1 g

(3) *Bacillus cereus*: Not more than 1,000/1 g

(4) *Escherichia coli*: n=5, c=2, m=0, M=10

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) *Clostridium perfringens*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.14 *Clostridium perfringens*, 4.14.2 Quantitative Test.”

(3) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(4) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

22-2 Ready-to-Eat/Convenience Foods

1) Definition

Products in the Ready-to-eat/Convenience foods refers to Ready-to-eat food, Fresh-cut product and Ready-to-cook foods that are manufactured/ processed/packed in such a way that consumers can directly consume without further cooking or after simple cooking process. However, those for which separate Standards and Specifications have been established are excluded.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Ready-to-eat food

It refers to foods manufactured/processed by adding food or food additives to ingredients of animal/plant origin and intended for direct consumption without further heating or cooking process; and includes lunch boxes, *gimbap* (Korean dried seaweed rolls), hamburgers and *sunsik* (dry grain food), etc.

(2) Fresh-cut product

It refers to products made by processing agricultural/forest products, such as washing, peeling, cutting or mincing, etc., or by adding food or food additives to such processed product; and intended for direct consumption without further processing, such as vegetable salad or sprouts, etc.

(3) Ready-to-cook food

It refers to foods, such as *guk* (Korean soup), *tang* (Korean broth), soup and *sundae* (Korean Blood Sausage), etc., that are manufactured/processed by adding food or food additives to ingredients of animal/plant origin, and intended to be consumed after simple cooking process, such as simple heating, etc., or other equivalent methods.

5) Specifications

(1) Bacterial count: n=5, c=0, m=0 (only applicable to sterilized products)

(2) Coliforms: n=5, c=1, m=0, M=10 (only applicable to pasteurized Ready-to-cook food)

(3) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to Ready-to-eat food

and Ready-to-cook food; except for pasteurized Ready-to-cook product); n=5, c=1, m=10, M=100 (only applicable to Fresh-cut product)

(4) *Staphylococcus aureus*: Not more than 100/1 g

(5) *Salmonella* spp.: n=5, c=0, m=0/25 g

(6) *Vibrio parahaemolyticus*: Not more than 100/1 g (only applicable to Ready-to-eat food and Fresh-cut product containing seafoods).

(7) *Bacillus cereus*: Not more than 1,000/1 g (only applicable to Ready-to-eat food and Fresh-cut product)

(8) Enterohemorrhagic *Escherichia coli*: n=5, c=0, m=0/25 g (only applicable to Fresh-cut product)

(9) *Clostridium perfringens*: Not more than 100/1 g (only applicable to Ready-to-eat foods and Fresh-cut product).

6) Test Methods

(1) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(2) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(4) *Staphylococcus aureus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.12 *Staphylococcus aureus*, 4.12.2 Quantitative Test.”

(5) *Salmonella* spp.

Test the sample according to “Chapter 7. General Test Methods, 4.

Microbiological Test Methods, 4.11 *Salmonella* spp.”

(6) *Vibrio parahaemolyticus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.13 *Vibrio Parahaemolyticus*.”

(7) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus.*”

(8) Enterohemorrhagic *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.16 Enterohemorrhagic *Escherichia coli*.”

(9) *Clostridium perfringens*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.14 *Clostridium perfringens*, 4.14.2 Quantitative Test.”

22-3 Dumplings

1) Definition

Dumplings refers to foods made by placing a filling made from various ingredients, such as meat, vegetables, soybean curd, or kimchi, etc., in a piece of dumpling skin formed from dough of grain flour or starch, and folding the skin to shape it.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

(1) Dumpling

It refers to foods made by shaping a mixture of meat and vegetables, etc., using dumpling skin.

(2) Dumpling skin

It refers to products formed from dough of grain flour or starch; and processed to be stuffed with a filling to make dumplings.

5) Specifications

(1) Sodium saccharin: Shall not be detected (only applicable to Dumpling).

(2) Tar colors: Shall not be detected (only applicable to Dumpling skin).

(3) Preservatives: Shall not be detected (only applicable to Dumpling skin).

(4) *Escherichia coli*: n=5, c=1, m=0, M=10 (only applicable to alcohol-treated Dumpling skin)

(5) Coliforms: n=5, c=1, m=0, M=10 (only applicable to pasteurized Dumpling skin)

6) Test Methods

(1) Sodium saccharin

Test the sample according to “Chapter 7. General Test Methods, 3.2 Artificial Sweeteners, 3.2.1 Sodium saccharin.”

(2) Tar colors

Test the sample according to “Chapter 7. General Test Methods, 3.4 Color

Additives.”

(3) Preservatives

Test the sample according to “Chapter 7. General Test Methods, 3.1 Preservatives.”

(4) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(5) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

23. Other Foods

23-1 Yeast Foods

1) Definition

Yeast foods refers to foods made by separating and refining edible yeast and drying or processing it; or manufactured by using edible yeast extracts, as a main ingredient, obtained by separating and refining edible yeast strains and subsequently extracting them by autolysis, enzymatic degradation or hot water extraction, etc.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Dried yeast foods shall be manufactured/processed with edible yeast as a main ingredient (not less than 60%).

(2) Yeast extract products shall be manufactured/processed with edible yeast extract as a main ingredient, which is obtained by separating and refining edible yeast strains and subsequently extracting them by autolysis, enzymatic degradation or hot water extraction (solid content of not less than 30.0%. However, solid content of not less than 15.0% for liquid product).

4) Food Type

5) Specifications

(1) Water (%): Not more than 10.0 (except for liquid products)

(2) Escherichia coli: n=5, c=1, m=0, M=10

6) Test Methods

(1) Water

Test the sample according to “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli* .”

23-2 Other Processed Products

1) Definition

It refers to products not falling under the category of “1. Confectioneries, Breads or Rice Cakes,” or “22. Ready-to-Eat/Convenience Foods” in “Chapter 4. Standards and Specifications for Each Food Product;” and excludes those whose definition, manufacturing/processing standards, main ingredients, properties and conditions, product name and use, etc., do not conform to respective Standard and Specification.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

4) Food Type

5) Specifications

(1) Properties and Conditions: Shall be acceptable

(2) Foreign matters: Shall be acceptable

(3) Acid value: Not more than 5.0 (only applicable to oil-fried/oil treated foods)

(4) Peroxide value: Not more than 60 (only applicable to oil-fried/oil treated foods)

(5) Coliforms : n=5, c=1, m=0, M=10 (only applicable to pasteurized products)

(6) Bacterial count : n=5, c=0, m=0 (only applicable to sterilized products)

(7) *Escherichia coli* : n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products for direct consumption without further processing or heating)

6) Test Methods

(1) Properties and Conditions

Test the sample according to “Chapter 7. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign matters

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matters.”

(3) Acid value

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.3.1 Acid Value.”

(4) Peroxide value

Test the sample according to “Chapter 7. General Test Methods, 2.1.5.3.5 Peroxide Value.”

(5) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(7) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

Chapter 5

Standards and Specifications for Prepared Foods, etc. from Food Service Business Operator (including Meal Service Facilities)

Chapter 5. Standards and Specifications for Prepared Foods, etc., from Food Service Business Operator (Including Meal Service Facilities)

1. Definition

"Prepared Foods from food service business operator (Including Meal Service Facilities)" refers to all types of foods (including beverages and draft beers, etc.) that are not intended for distribution or sale and to be directly served to customers by cooking, etc.

2. Ingredient Standards

1) Requirements for Ingredients

(1) Ingredients shall be fresh in quality; they shall not be spoiled/deteriorated, or contaminated by toxic/harmful substances.

(2) Water used for cleaning ingredients and utensils, preparing foods, and drinking, etc., shall conform to the Water Quality Standards set forth in the Management of Drinking Water Act; and Norovirus shall not be detected (except for tap water).

(3) Ice used in food service establishments shall have bacterial count of not more than 1,000 per 1 ml, and shall be negative for *Escherichia coli* and *salmonella* spp. per 250 ml; other physico-chemical specifications shall conform to the Standards and Specifications set forth in "Chapter 4. Standards and Specifications for Each Food Product, 2-4 Ices."

(4) Ingredients of animal/plant origin that are not collected, handled, processed, manufactured or managed for the purpose of human consumption shall not be used for cooking foods.

2) Storage and Preservation of Ingredients

A) Common

(1) All foods, etc., shall be handled in a sanitary manner and stored to prevent contamination by harmful organisms, such as mice and cockroaches, etc.

(2) Foods, etc. shall not be stored together with cleaning agents, or chemical substances, pesticides or poisons, etc., that are harmful to the human body.

(3) Foods, etc., with specified Standards and Specifications shall be stored/preserved according to such specified Standards; ingredients among agricultural/forest/livestock/fishery products that need to be kept fresh shall be stored refrigerated or frozen.

(4) Foods that can be directly used after pretreatment, such as washing, etc., or processed foods shall be placed in a container, etc., and stored in a clean place in order to prevent contamination from the ground.

(5) Other than those individually labeled, foods to be refrigerated shall be stored at 10°C or below; foods to be frozen, at -18°C or below.

(6) Thawing of frozen foods

① Frozen foods shall be defrosted in a sanitary manner.

② Frozen foods shall be kept refrigerated until cooked if not used immediately after thawing.

③ Frozen foods shall not be refrozen once thawed.

B) By Food Product

(1) Grains (rice, barley and wheat flour, etc.)

① They shall be stored in a sanitary manner in a dry and cool place.

② They shall be stored in a manner that prevents mold growth or discoloration

(2) Fats and oils (sesame oil, perilla oil, brown rice oil, corn oil and soybean oil, etc.) and nuts with high oil content, etc., shall be stored in a cool area away from direct sunlight, or refrigerated or frozen.

(3) Livestock/fishery products (such as beef, pork or fish, etc.) shall be individually packed in a sanitary manner and stored refrigerated or frozen after being separated from other foods using containers, packages, etc.

(4) As for fruits and vegetables (apples, pears, peaches, grapes, Korean cabbages, radishes, onions, cucumbers, cabbages and spinach, etc.), washed fruits and vegetables shall be stored separately from unwashed ones to avoid mix-up.

(5) Other Foods

① Seasoning foods shall be stored covered with stoppers or covers in order to prevent inclusion of foreign matters or contamination.

② Soybean curd shall be stored refrigerated.

3. Food Preparation and Management Standards

(1) Frying fats and oils in use shall have an acid value of 3.0 or less.

(2) Utensils directly contacting food during cooking shall be managed to prevent contamination due to corrosion, etc.

(3) Cooked foods shall be placed in a sanitary container, etc., and managed to prevent cross-contamination with uncooked foods.

(4) Cooked foods that are cold, such as cold noodle broth, etc., shall be stored at 10°C or below; warm foods, at 60°C or above, as far as possible.

(5) Water in a fish tank to store fishery products shall be managed in a sanitary manner; provided, however, that substances used to remove foam or filter water, etc., for unavoidable reasons, shall be usable as a food ingredient or meet the Component Specifications for chlorine dioxide, silicon dioxide and silicon resin in food additives.

(6) Cleaning agents used in washing vegetables or fruits, shall meet the Specifications For Cleaning Agents for Fruits and Vegetables under the “Specifications and Standards for Hygienic Products” (notified by Ministry of Health and Welfare), and no cleaning agents shall be used for cleaning those other than fruits and vegetables.

(7) Frozen foods intended for direct consumption by consumers may be sold defrosted only within 24 hours after being thawed.

4. Specifications

A) Prepared foods, etc.

(1) Properties and Conditions: They shall have original color, gloss and flavor without off-taste/flavor.

(2) Foreign matters: Foods shall not contain foreign matters equal to or more than the amount left after removing them to the maximum extent possible in the

ingredient treatment process or those that are contaminated and unhygienic; except for those not completely removed and remained during normal cooking process in practice, such as skin of other food or raw plants or soil, etc., that are small in quantity and do not have a risk to harm human health in general.

(3) Escherichia coli: Not more than 10/1 g

(4) Bacterial count: Not more than 3,000/g (only applicable to slush beverages; except for products containing milk products, lactic acid bacteria, fermented foods and non-pasteurized products)

(5) Food-borne pathogen: Foods prepared at food service business operators (including meal service facilities) shall be negative for food-borne pathogens, such as S*almonella* spp.; *Staphylococcus aureus*; *Listeria monocytogenes*; Enterohemorrhagic *Escherichia coli*; *Camplyobacter jejuni/coli*; and *Yersinia enterocolitic*a, etc. Also, *Vibrio parahaemolyticus* and *Clostridium perfringens* shall not exceed 100 per gram; *bacillus cereus*, 10,000 per gram. However, *Staphylococcus aureus* shall not be more than 100 per gram in foods that are not heated during the cooking process, or those cooked after being heated.

B) Drinking water for serving

(1) *Escherichia coli*: Negative/250 mL

(2) *Salmonella* spp.: Negative/250 mL

(3) *Yersinia enterocolitica*: Negative/250 mL

C) Cooking utensils, etc.

(1) Fish tank water

① Bacterial count: Not more than 100,000/1 mL

② Coliforms: Not more than 1,000/100 mL

(2) Dish cloths (except those in use)

① *Escherichia coli*: Shall be negative

(3) Those used at meals or to serve foods on, such as knives, cutting boards, spoons, chopsticks, plates and bowls, etc. (except for those in use)

① *Salmonella* spp.: Shall be negative

② *Escherichia coli*: Shall be negative

5. Test Methods

1) Sampling and Handling

(1) Sampling methods

Conduct sampling according to “Chapter 6. Sampling and Handling Methods.”

(2) Test solution

Follow instructions in “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.3 Preparation of Test Solutions.”

2) Foreign matters

Test the sample according to “Chapter 7. General Test Methods, 1.2 Foreign Matters.”

3) *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

4) Bacterial count

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

5) *Salmonella* spp.

(1) Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

(2) To test salmonella in drinking water for serving, filter a 250 mL sample according to the membrane filtration method, and place the filter paper onto a MacConkey plate (badge 30) or Desoxycholate citrate plate (badge 31) and culture for 24 hours at 35°C. Once typical colonies are confirmed, identify them according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp., C. Identification Test.”

6) *Staphylococcus aureus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.12 *Staphylococcus aureus*.”

7) *Listeria monocytogenes*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.15 *Listeria monocytogenes*.”

8) Enterohemorrhagic *Escherichia coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.16 Enterohemorrhagic *Escherichia coli*.”

9) *Campylobacterjejuni*/*coli*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.19 *Campylobacterjejuni*/*coli*.”

10) *Yersinia enterocolitica*

(1) Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.17 *Yersinia enterocolitica*.”

(2) To test *Yersinia enterocolitica* in drinking water for serving, filter a 250 mL sample according to the membrane filtration method, and place the filter paper on to a CIN plate (badge 45) and culture for 24~48 hours at 30°C. Once typical colonies are confirmed, identify them according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.17 *Yersinia enterocolitica*, C. Identification Test.”

11) *Vibrio parahaemolyticus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.13 *Yersinia enterocolitica*.”

12) *Clostridium perfringens*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.14.2 Quantitative Test Methods for *Clostridium perfringens*.”

13) *Bacillus cereus*

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18.2 Quantitative Test Methods for *Bacillus cereus*.”

14) Coliforms

Test the sample according to “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7.2 Quantitative Test Methods for Coliforms, A. Most Probable Number (MPN) Method.”

Chapter 6

Sampling and Handling Methods

Chapter 6. Sampling and Handling Methods

1. Significance of Sampling

To conduct sampling, a food inspector samples the part of test object and tests it for conformance to the Standards/Specifications and safety of contaminants pursuant to the Food Sanitation Act. Given that administrative actions are taken according to the test results, selection of test objects and sampling/ handling/transportation/test inspection, etc. shall be conducted in a scientific manner while ensuring efficiency. Accordingly, sampling and test request to food sanitation inspection laboratories has significant implications, and therefore, food sanitation supervisors shall be equipped with sufficient knowledge on sampling and handling methods to fulfill the duty.

2. Definitions of Terms

1) Sample ： It means a specimen sampled from test objects.

2) Test object： It means an object to be sampled, such as foods of the same type that are produced/manufactured/processed/packaged under the same condition; provided, however that although agricultural/forest/ livestock/fishery products belonging to the same commodity that are produced/arrived/transported simultaneously may constitute a single test object, those needed to be tested for net contents shall not be considered as a single test object.

3) Bulk： It means a test object that is not packaged to be distributed and sold as is to the final consumer.

3. General Principles of Sampling

1) Sampling shall be conducted by food sanitation supervisors in accordance with Article 32 of the “Food Sanitation Act” and Article 16 of the Enforcement Decree of the same Act.

2) Sampling shall be conducted to ensure representativeness of the test objects by using “Chapter 7. General Test Methods, 13. Attachments, 13.9 Random Number

Tables.” However, if there are reasons for not using such tables, a person responsible for sampling may select/sample a test object at his/her discretion.

3) Sampling shall be conducted to obtain a minimum quantity to represent the entire test objects by considering test objectives and test items, etc.

4) At the time of sampling, specimens shall be taken according to the Sampling Decision Table, and by applying the number of sampling locations or number of test samples specified in “6. Individual Sampling and Handling Method;” or if overlapped, the enhanced number of sampling locations or number of test samples. However, for utensils and containers/packages, sampling shall be conducted to obtain the amount required for testing conformance with the Standards and Specifications for Foods, etc., rather than according to the Sampling Decision Table.

<Sampling Decision Table>

Size of Test Objects (kg)	# of Sampling Locations (not less than)	# of Test Samples
~ Less than 5,000	2	1
Not less than 5,000 ~ Less than 15,000	3	1
Not less than 15,000 ~ Less than 25,000	5	1
Not less than 25,000 ~ Less than 100,000	8 (4×2)	2
Not less than 100,000 ~ Less than 1,000,000	10 (5×2)	2
Not less than 1,000,000 ~	12 (4×3)	3

※ For test objects with a size not less than 25,000 kg but less than 100,000 kg, take 2 samples in total, each of which is obtained by sampling from not less than 4 locations and combining them to make one sample, and request them for testing; for those with a size not less than 100,000 kg but less than 1,000,000 kg, take 2 samples in total, each of which is obtained by taking samples from not less than 5 locations and combining them to make one sample, and request them for testing; for those with a size not less than 1,000,000 kg, take 3 samples in total, each of which is obtained by taking samples from not less than 4 locations and combining them to make one sample, and request them for testing.

5) Specimens that are difficult to obtain according to the Sampling Decision Table, such as frozen samples, large packaged samples and foods in distribution, etc., may be sampled by a food sanitation supervisor at his/her discretion, ensuring

their representativeness, within the amount of collection.

6) In general, samples with the same lot number, date of manufacture and expiration date shall constitute one test object; those without such indications shall be sampled by identifying food variety, food type, manufacturer, sign, exporting country, date of export, date of arrival, loading vessel, transport vehicles, truck, type of package and appearance condition, etc., in light of the properties and test objectives of the foods.

7) Precautions shall be taken to ensure not to damage sampled specimens. In addition, when foods are sampled before being packaged or after being unpacked, care shall be taken to prevent inclusion of foreign matters and microbial contamination, etc.

8) Sampled specimens shall be sealed, and made impossible to open without breaking seal.

9) For utensils or containers/packages with the same materials and background colors but with different uses/shapes/sizes or product names, a representative specimen may be used. However, for a set whose elements are in different materials and background colors, each set, which is a sales unit, may be sampled.

10) Food sanitation supervisor may first sample areas suspected for mycotoxins or radioactive contamination, etc. and request to test additional suspected materials, if any, by adding test items.

11) For microbiological testing, sampling shall be conducted to obtain the number (n) of samples specified in “Chapter 2. Common Standards and Specifications for General Foods, 4. Standards and Specifications for Each Food Product,” rather than according to the Sampling Decision Table.

4. Sampling and Handling Tips

In the event of sampling, the physical, chemical and biological state of samples shall be considered, such as test objectives, the type, quantity, possibility of contamination and homogeneity of test foods, etc.

1) Sampling tips

(1) For heterogeneous test foods, etc.

① For heterogeneous samples, a large quantity of samples are needed in general. However, if only a small quantity of samples may be obtained due to unavoidable reasons, such as test efficiency and economic feasibility, they may be taken from objects deemed suspicious in terms of appearance and storage condition overall, etc.

② For products that are heterogeneous in terms of properties of foods, (such as food additives in the spice oleoresins, etc.), due to precipitation/suspension, etc., representative samples shall be taken after treating the entire product to make it as homogenous as possible.

(2) Determination of homogeneity depending on test items

The homogeneity of samples may vary depending on test items. A certain test food deemed heterogeneous according to the evaluation of freshness, may be deemed homogenous in terms of the components of heavy metals or food additives, etc. contained therein, and may be sampled.

(3) Sampling from packed foods

① Foods distributed in containers/packages, such as cans, bottles, boxes, etc., shall be sampled as they are without opening such containers/packages, if possible.

② Food packed in large containers/packages, etc., may be sampled by taking only a part as a specimen that may represent the entire test object.

(4) Sampling of products in bulk on vessels

① Products in bulk shall be sampled on board or before entering the silo of bonded sheds, unless there are unavoidable reasons for not doing so.

② Where agricultural/forest/livestock/fishery products with the same commodity name loaded in the same vessel are dispersed and loaded in different places, the entire products shall constitute one test object, and be sampled from randomly selected places, using random number tables.

③ Obtain 5 samples in total, each of which is obtained by sampling from not less than 5 locations and combining them to make one sample, and by ensuring representativeness of the bulk products in the same vessel; then request them for testing.

(5) Sampling from refrigerated or frozen foods

When refrigerated or frozen foods are sampled, they shall be sampled while maintaining their refrigerated or frozen state, respectively.

(6) Sampling for microbiological testing

① For sampling/transportation/storage of samples, sealed containers/packages, etc., shall be used to maintain the condition at the time of sampling.

② Samples for microbiological testing shall be collected as unit-packaged, if possible, to prevent microbial contamination. Where specimens are taken after divided into small pieces, sterilized instruments/containers, etc. shall be used to sample aseptically.

③ Only foods being stored/distributed in a normal manner shall be sampled except for unavoidable cases.

④ Only fully-packaged foods shall be sampled; except for cases where relevant information and special sample collection plans shall be followed, or for prepared foods at food service business operator.

(7) Sampling of gas-emitting foods

① In cases where specimens easily emit gases at normal temperature, thereby affecting test results, a packaged unit shall be sampled as one sample without opening such package.

② However, if specimens shall be taken after divided into small pieces, sampling shall be conducted in a manner that does not affect test results, such as by sealing/cooling down the sampled specimens as quickly as possible.

(8) Foods in paste or syrup form, etc.

① Specimens that are difficult to be sampled due to high viscosity, may be sampled by lowering viscosity in an adequate manner, such as raising the temperature to the extent not affecting test results.

② Highly viscous and heterogeneous specimens that cannot be made homogeneous using ordinary methods may be taken after being treated with homogenizing instruments, etc. in a manner that does not affect test results.

(9) Precautions for sampling according to test items

① Water

Samples shall be placed into airtight containers, and temperature change shall be minimized as much as possible in order to prevent water content change due to evaporation or moisture absorption, etc.

② Acid value and peroxide value

Samples shall be placed into airtight containers that block light; and the space volume of the container and temperature change shall be minimized as much as possible in order to prevent the acceleration of fat oxidation due to light or temperature, etc.

2) Documentation of sampling statements

Food sanitation supervisor shall attach sampling statements provided in “Chapter 7. General Test Methods, 13. Attachments, 13.11 Sampling Statements” to corresponding samples during sampling; unless omission of such statement is deemed not interfering with testing for Standards/Specifications.

3) Attachment of identification tags

For imported food inspection (except distribution/collection inspection), identification tags provided in “Chapter 7. General Test Methods, 13. Attachments, 13.12 Identification Tags” shall be attached to corresponding foods in bonded warehouses, etc., to indicate collection of samples after sampling.

4) Tips for transporting samples

(1) Sampled specimens shall be carefully transported to laboratories in a manner that prevents contamination, breakage, damage, defrosting and deformation, etc. of the samples.

(2) Where samples are packaged to be transported in long distance or via public transportation, extra precautions shall be taken to prevent damage to such samples.

(3) Transportation of frozen samples

① Frozen samples shall be transported in a frozen state.

② If cold storage equipment is not available, dry ice or other methods may be used to transport samples, maintaining them in a frozen state.

(4) Transportation of refrigerated samples

Refrigerated samples shall be transported, maintaining the temperature. In

cases where ice, etc. is used to maintain refrigeration temperature, precautions shall be taken to prevent samples from being contaminated by water melted from ice; where dry ice is used, to protect samples from being frozen.

(5) Transportation of samples for microbiological testing

① Samples susceptible to spoilage/decomposition

Samples for microbiological testing shall be aseptically taken and transported to a testing agency within 24 hours, while being maintained at low temperatures (5°C ± 3 or below). In the event that samples are not transported according to this regulation due to unavoidable circumstances, re-collection shall be done, or the transported samples shall be requested to be tested by a food sanitation inspection laboratory after the sampling date and their states are recorded.

② Samples without risk of spoilage/decomposition

Samples without risk of spoilage/decomposition do not always have to be transported at refrigeration temperature even if they are for microbiological testing, but precautions shall be taken to prevent contamination or damage to the samples and their packages, etc.

③ Precautions for use of ice, etc.

When using ice, etc., precautions shall be taken to prevent samples from being contaminated by water melted from ice.

(6) Transportation of gas-emitting samples

Specimens that are taken after divided into small pieces shall be transported properly in a refrigerated or frozen state.

5. Sampling Instruments and Containers

1) Due to different types, shapes and containers/packages of samples, etc., sampling instruments and containers shall be prepared to be appropriate for a sampling purpose.

2) They shall conform to the “the Standards and Specifications for Food Utensils, Containers and Packages.”

3) Instruments and containers shall be convenient for transportation, cleaning and

sterilization. In addition, parts of the sampling instruments/containers for microbiological testing that directly contact samples shall be sterilized.

4) Instruments and containers that directly contact samples shall be those that do not affect test results.

5) Types of sampling instruments and containers

(1) Sampling instruments

Scales; tweezers; scissors; knives; can openers; hammers; chain saws or saws; grain sampling probes (triers); driers; pipettes; cutters; liquid sampling pumps or tubes; ladles; and funnels, etc.

(2) Sampling containers/packages

Sampling bags (large, medium and small); and sampling bottles (wide-mouth bottles), etc.

(3) Sampling instruments for microbiological testing

Sterile bags; sterile bottles; disposable sterile plastic pipettes; sterile pipettes inspirators; disposable sterile gloves; 70% ethyl alcohol; sterilized stainless-steel ladles; sterilized stainless-steel forceps, etc.

(4) Devices for transportation of refrigerated/frozen samples

Coolers; ice packs; and real-time temperature recorders, etc.

(5) Others

Safety helmets; portable ladders; sanitary boots; tapes; coolers; cameras; and writing tools, etc.

6. Individual Sampling and Handling Methods

1) Sampling of fishery products

(1) Sampling methods for organoleptic testing

Sampling for organoleptic testing shall be conducted by dividing fishery products into unpackaged and packaged ones. Then, perform sampling according to the following table, using random number tables, etc., and conduct an appearance (organoleptic) test. Among such samples, perform sampling to obtain a number of specimens equal to the number of samples to

be graded and perform grading.

① Unpackaged fishery products (with variable unit weights)

Test Object	# of Samples to Take	# of Samples to Grade	Sampling Tips
Less than 1 ton	3	2	○As for the number of samples to take, one fish weighing not less than 2 kg, or the amount that is sampled at one time with an instrument or a net (2~3 kg) shall constitute one sampled specimen. ○As for fishery products distributed and accommodated, alive, across two or more fish tanks, such as live fishes, etc., additional specimens may be taken, considering the quality status, size, weight, etc. of each fish tank.
Not less than 1 ton~ less than 3 ton	5	3	
Not less than 3 ton~ less than 5 ton	7	4	
Not less than 5 ton~less than 10 ton	9	5	
Not less than 10 ton~less than 20 ton	11	6	
Not less than 20 ton	13	7	

② Packaged products (including unpackaged block-type products with uniform unit weight)

Test Object	# of Samples to Take	# of Samples to Grade	Sampling Tips
Not more than 4	1	1	○ Representative specimens shall be taken, considering the date of manufacture (date of packaging), size and weight, etc. ○ For more than 1,001 test objects, additional specimens may be taken.
5~ 50	3	1	
51~ 100	5	2	
101~ 200	7	2	
201~ 300	9	3	
301~ 400	11	3	
401~ 500	13	4	
501~ 700	15	5	
701~1,000	17	5	
Not less than 1,001	20	6	

(2) Sampling methods for precision testing

① Samples for precision inspection shall be taken at random from fishery products subject to grading for organoleptic testing.

② Shellfishes (those with shells attached), algae and agar, etc., shall be sampled by weight; others for precision inspection shall be sampled based on the number of fishes or unit packages.

③ Fishery products for packaged sliced-raw-fish having the risk of affecting the results of a precision inspection may be sampled on a packaging unit basis.

④ For precision inspection, only edible parts of the sampled specimens shall be taken and homogenized, from which a certain amount shall constitute one test sample. However, in cases of fishes, muscle parts including skin shall constitute a test sample after heads, tails, intestines, bones and scales are removed. In this case, samples taken out from water or those washed with water shall be placed on the standard sieve (with 20 meshes or its equivalent) to remove water, then homogenized.

⑤ The amount to be sampled for precision inspection shall be as shown in the following table. However, high-priced products, or those that are difficult to be sampled by the number of fishes or unit package, may be sampled by cutting/splitting/grinding samples to obtain the minimum amount necessary for precision inspection (300 g of edible parts) within the limit amount to be sampled.

By Type	Amount to be Sampled (unit)
○ Large-sized fishery products	
- Individual weight of not less than 2 kg	2 (packaged)
- Individual weight of not less than 1 kg~less than 2 kg	3 (packaged)
○ Medium-sized fishery products	
- Individual weight of not less than 500 g~less than 1 kg	3 (packaged)
- Individual weight of not less than 200 g~less than 500 g	5 (packaged)
○ Small-sized fishery products	
- Individual weight of not less than 100 g~less than 200 g	10 (packaged)
- Individual weight of not less than 50 g~less than 100 g	10~20 (packaged)
- Individual weight of less than 50 g	Not more than 2 kg
○ Shellfish (with shells attached)	1~4 kg
○ Other fishery products, such as algae and agar, etc.	0.3~0.5 kg

2) Sampling for pesticide residue testing

(1) Samples for pesticide residue testing shall be stored and transported while refrigerated to the extent possible.

(2) Processed foods shall be sampled according to “3. General Principles of Sampling, 4) Sampling Decision Table;” and agricultural products shall be sampled according to the following table:

Size of Test Object (kg)	# of Sampling Locations (Minimum)	# of Test Samples
~ Less than 5,000	3	1
Not less than 5,000 ~ Less than 15,000	5	1
Not less than 15,000 ~ Less than 25,000	8	1
Not less than 25,000 ~	14	1

3) Sampling for aflatoxin testing

(1) Processed foods shall be sampled according to “3. General Principles of Sampling, 4) Sampling Decision Table;” and grains, pulses, peanuts and nuts shall be sampled according to the following table:

Size of Test Object (kg)	# of Sampling Locations (Minimum)	# of Test Samples	Amount to be sampled (kg)
~ Less than 1,000	8	1	1
Not less than 1,000 ~ Less than 5,000	10	1	1
Not less than 5,000 ~ Less than 15,000	15	1	1
Not less than 15,000 ~ Less than 25,000	18 (9×2)	2	2
Not less than 25,000 ~ Less than 60,000	20 (10×2)	2	2
Not less than 60,000 ~	24 (8×3)	3	3

Example) In cases where the number of test samples is three (3), specimens taken from not less than 8 places shall constitute one specimen. Using this method, total of 3 specimens shall be obtained and requested to be tested as a sample.

4) Sampling for veterinary drug residues testing

Processed foods and livestock products shall be sampled according to “3. General Principles of Sampling, 4) Sampling Decision Table;” and fishery products shall be sampled according to “6. Individual Sampling and Handling Methods, 1) Sampling from Fishery Products.” However, for the products where veterinary drug residues are deemed distributed unevenly, the number of test samples shall be equal to the number of sampling locations.

5) Sampling for genetically modified component testing

Processed foods shall be sampled according to “3. General Principles of Sampling, 4) Sampling Decision Table;” and grains, pulses, and soybean powder shall be sampled according to “6. Individual Sampling and Handling Methods,

2) Sampling Table for Pesticide Residue Testing.”

6) Sampling from containers

(1) Bulk grain shipments shall be randomly sampled, following the Z-Pattern inside a container.

(2) In cases where multiple containers are one test object, they shall be opened for sampling according to the following table. However, the number of containers to open may be adjusted, considering the number of sampling locations, etc. specified in this Sampling and Handling Methods.

# of Containers	1-3	4-6	7-10	11-20	21-30	31-50	51 of more
# of containers to open	1	Not less than 2	Not less than 3	Not less than 4	Not less than 6	Not less than 8	Not less than 10

(3) In cases where representative samples cannot be collected from foods loaded in containers, sampling may be done after not less than 1/3 of the foods are unloaded from containers test such foods, etc. In this case, for refrigerated/frozen samples, shipment may be unloaded in places where storage temperatures may be maintained.