

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 Ingredients of Foods; Standards for Manufacturing, Processing, Using, Cooking or Storing Foods; Specifications for Food Components; and Test Methods for Standards/Specifications pursuant to Article 7(1) of the Food Sanitation Act;
 - B) Standards for Labeling of Foods, Food Additives or Livestock Products and Apparatus or Containers and Packaging under Article 4 (1) of the Food Indication Advertising Act, and Genetically Modified Foods under Article 12-2(1) of the Food Sanitation Act;
 - 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 5. 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) The definition of individual food type in this notification describes the general characteristics and so, when the manufacturing methods, such as using new manufacturing technology, or used ingredients of manufactured food do not exactly

match the definition of food type in this notification but the food is identical to a product of a certain food type, it can be categorized as the corresponding food type.

- 4) 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.
- 5) 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.
- 6) Foods for which a specific test method is not provided in “Chapter 5. Standards and Specifications for Each Food Product” in this Notification, shall be tested according to the corresponding test methods under “Chapter 8. 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.
- 7) 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 : cm^2

- ⑤ Calorie : kcal, kj
 - ⑥ Crushing Strength: N (Newton)
 - ⑦ Temperature: °C
- 8) The standard temperature shall be 20°C; normal temperature shall be between 15~25°C, room temperature shall be between 1~35°C; and tepid temperature shall be between 30~40°C, respectively.
 - 9) 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.
 - 10) 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.
 - 11) 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 7] “Guidelines on Setting Maximum Residue Limits for Pesticide and Veterinary Drug in Food.”
 - 12) 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.

13) 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°C or lower; warm water, as water at a temperature between 60~70°C; and hot water, as water at a temperature approximately 100°C.
- (3) Unless specifically provided otherwise, “boiling water or heating in water,” means heating at a temperature approximately 100°C; provided that steam at a temperature approximately 100°C 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°C.
- (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 5. Standards and Specifications for Each Food Product,” the corresponding Standards and Specifications shall apply preferentially. However, as for the standards for use of food additives among foods, “Standards and Specifications for food additives” first apply.
- 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) Foods and long shelf-life foods sold and labelled for the consumption of infants and young children or elderly shall meet “Chapter 3. Foods sold and labelled for consumption of infants and young children or elderly” and “Chapter 4. Standards and Specifications for Long Shelf-life Foods”, respectively, along the standards and specifications specified in above 1). In cases of duplicate provisions in the Standards and Specification, the stricter provision shall apply
- 4) “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.
- 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 7. 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 colors” refer to 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, “tar colors other than those permitted” refer to those tar colors not permitted in the corresponding food types in accordance with “Standards and Specifications for Food Additives” among tar colors specified in Chapter 1. 2. 9).
- 11) 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); Parahydroxy benzoate (methyl and ethyl) ; and Propionic acid and its salts (sodium and calcium).”
- 12) For the purpose of this Notification, “antioxidant” means “Butylated Hydroxy Toluene; Butylated Hydroxy Anisol; tert-Butylhydroquinone; Propyl Gallate; Disodium Ethylenediaminetetraacetate; Calcium Disodium Ethylenediaminetetraacetate.”
- 13) 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) “Food type” refers to the grouping of food with similar characteristics by defining the common features based on the product characteristics such as ingredients, manufacturing methods, use, intake form and properties in order to secure the safety and quality of food in manufacturing, preserving, and distribution processes, and facilitate the provision of information on products.
- 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), (7) and (8).
- 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; X-ray pasteurization, electron beam pasteurization; gamma ray insect control; electron beam insect control; X-ray insect control, gamma ray irradiation; X-ray irradiation and electron beam irradiation—or collectively, radiation pasteurization; radiation insect control; and

radiation irradiation, etc. However, except where X-rays are used for examination purposes.

- 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) “Uncooked 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	-	Oats, Millet, Buckwheat, Wheat, Barley, Sorghum, Rice, Amaranth(seed), Maize, Job's tears, Foxtail millet, Quinoa, Triticale, Japanese-barnyard millet, Rye, etc.
Potatoes	-	Potato, Sweet potato, Konjac(Devil's tongue), Yam, Maca, Yacon, Cassava (tapioca), Taro, etc.
Pulses	-	Kidney bean, Mung bean, Soybean, Cowpea, Lentils, Lima bean, Pea, Chickpea, Sword bean, Fava bean, , Hyacinth bean, Red bean, Pigeon pea, etc.
Nuts and Seeds	Peanut or Nuts	Peanut, Hazel nut, Acorn, Macadamia, Chestnut, Brazil nut, Almond, Ginkgo nut, Pine nut, Cashew nut, Pistachio, Pecan, Walnut, etc.
	Oilseeds	Evening primrose seed, Hempseed, Ben Moringa seed, Perilla seed, Cotton seed, Olive fruit, Rape/Canola seed, Sesame, Palm, Sunflower seed, Pumpkin seed, Safflower seed, etc.
	Seed for beverage and sweets	Senna seed, Guarana, Cacao bean, Coffee bean, Cola nut, Oriental raisin(fruit) etc.
Fruits	Pome fruits	Persimmon, Quince, Pear, Loquat, Apple, Pomegranate, etc.
	Citrus fruits	Mandarin (including Oval Kunquat), Lemon (including Lime), Citron, Orange, Yuja, Grapefruit, Trifoliate orange, etc.
	Stone fruits	Jujube, Japanese apricot, Peach, Cornus officinalis fruit (Sansuyu), Apricot, Nanking cherry, Schisandra berry, Plum, Cherry, etc.
	Berries and other small fruits	Goji berry, Cudrania tricuspidata fruit, Arguta kiwifruit, Strawberry, Mauntain ash Fig, Berries [Blueberry, Bilberry, Korean Black Raspberry (including Raspberry, Black berry, wild berry), Aronia berry, Elderberry, Mulberry, Currant, Cranberry/Cowberry, etc, Akebia, Grape (including Crimson glory vine fruits), etc.

	Assorted tropical and sub-tropical fruits	Soursop/Graviola fruit, Guava, Date palm, Durian, Litch(Lychee), Mango, Mangosteen, Banana, Jackfruit, Avocado, Açai, Acerola, Dragon fruit, Longan, Coconut, Kiwi/Kiwifruit, Pineapple, Papaya, Passion fruit, Pawpaw, etc.
Vegetables	Flowerhead brassicas	Korean Cabbage (Head), Broccoli (including Cauliflower), Cabbage (Head, including Brussels sprouts), etc.
	Leafy vegetables	Mustard leaves, Coastal hog fennel/Saposhnikoviae Radix leaves, Mustard green, Mizuna, Godeulppaegi, Gondre, C. pseudowasabi (leaves), Chili pepper leaves, Ligularia stenocephala leaves, Water spinach, Chard, Silkworm thorn, Shepherd's purse, Korean goatsbeard, New green, Tatsoi, Dachungchae, Dang gui leaves, Dolnamul, Polygonatum leaves, Perilla leaves, Radicchio, Arugula/Rucola, Butterbur (Petastites japonicus), Radish (including leaves and Young radish), Dandelion, Plebeian sage, Seasoned Pigweed, Beet Leaves, Mulberry Leaves, Alpine leek leaves, Lettuce(leaf), Feild aster(including Ulleungdo aster), Turnip Swede, Spinach, Angelica keiskei (Miq.) Koidz, Korean wormwood, Crown Daisy, Seumbagwi(Ixeridium dentatum), Chinese mallow, Lettuce(head), Cow parsnip, Winter cabbage(including Bomdong, SSam Cabbage Wrap), Ussuri thistle, Indian lettuce, Burdock leaves, Common daylily, Witloof/Chicon, Rapeseed leaves, Asian plantain, Perilla frutescens, Chamnamul, Bok choy, Chunchae, Chwinamul, Chicory(leaves)(including Endive), Kale, East Asian wild parsley, Parsley, Squash leaves, etc
	Stalk and stem vegetables	Salt sandspurry, Sweet potato vines, Royal fern, Bracken (Pteridium aquilinum)), Wild chive, Dureup, Allium chinense, Leek, Water dropwort, Chinese chives, Hooker chives, Celery, Asparagus, Bamboo Shoot, Kohlrabi, Taro stem, Welsh onion, Green garlic (including stem of garlic), etc.
	Root and tuber vegetables	C. pseudowasabi (root), Carrot, Deodeok (Codonopsis lanceolata), Chinese bellflower, Polygonatum root, Garlic, Radish (root), Mulbangki (root), Beet (root), Sugar beet, Ginger, celeriac, Fresh Ginseng

		(including wood-cultivated ginseng), Turnip root, Onion (Bulb), Lotus root, Burdock, Tiger lily(scaly bulb, root), Chicory (root), Wild parsnip, etc..
	Fruiting vegetables, Cucurbits	Melon, Gourd, Watermelon, Bitter melon, Cucumber, , Korean melon, Squash, etc.
	Fruiting vegetables other than Cucurbits	Eggplant, Chili pepper, Okra, Tomato (including Cherry tomato), Beans and peas with pods(Soybeans, Snap beans, Peas, etc.), Sweet pepper (including paprika), etc.
Mushrooms	-	Parasol mushroom, Cauliflower mushroom, Pholiota nameko, Oyster mushroom, Tree ear, Black hoof mushroom, King oyster mushroom, Stone ear mushroom, Pine mushroom, Almond mushroom, Cauliflower coral, Common mushroom, Reishi mushroom, Enoke, Oak mushroom, Cantharellus luteocomus, etc.
Herbs and Spices	Herbs	Soursop, Coriander leaves, Gynostemma leaf (Poor man's ginseng), Ben moringa leaves, Lavender, Lemongrass, Lemon myrtle, Lemon balm, Rosemary, Rooibos, Matari, Maté, Mints (Pepper mint, Spear mint, Apple mint, etc.), Milk thistle (leaf), Basil leaves, Korean mint, Thymus quinquecostatus Čelak, Dill, Stevia, Edible flowers (Indian chrysanthemum, Marigold, Rose, Chamomile, Hibiscus, etc.), Ironwort, Oregano, Olive leaves, Laurel leaves, Jasmine, Japanese pepper leaves, Culantro, Thyme, Honey bush, Fenugreek leaves, Fennel leaves, etc.
	Spices, fruit or berry	Juniper berry, Vanilla orchid, Allspice (fruit), Mastic-leaf prickly ash, Cardamom (fruit), Star anise(fruit), Caper berries, Pepper (fruit) etc.
	Spices, seeds	Mustard seed, Coriander seed, Milk Thistle (seed), Basil (seed), Dill (seed), Celery seed, Anise seed, Nutmeg (seed), Shiso (seed), Caraway weed, Cumin seed, Fenugreek seed, Fennel (seed), etc.
	Spices, root or rhizome	Turmeric root, etc.
	Other spices	Cassia bark, Myrrh, Saffron, Cloves (buds), etc.
Tea leaves	-	Tea
Hops	-	Hop
Algae	-	Meristotheca papulosa, Sea lettuce, Ecklonia stolonifera (Gompi), Seaweed (Gim), Sea string, Kelp (Dasima),

		Chondracanthus tenellus, Stone seaweed (Dol gim), Pelvetia siliquosa, Seaweed fulvescens, Sargassum fulvellum, Sea mustard, Seaweed furcata, Campylaephora hypnaeoides, Spirulina, Ceylon moss, Irish moss carragheen, Sea staghorn, Chlorella, Sea weed fusiforme, Green laver, etc.
Other plants		Sweet sorghum, Mountain ash(peel), Sugar cane, etc.

※ '/' refers to different names for the agricultural commodity, '()' refers to a part of the agricultural commodity or another agricultural commodity with the same pesticide MRL.

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 Egg, 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 almon, Salmon, Ayu sweetfish, Common eel, etc.
		Marine fishes	Ray, flounder, Pacific cutlass fish, Croaker, Chub mackerel, Pacific saury, Japanese Glyingfish, Bastard halibut, Spottybelly greenling, Seabass, Pacific cod, Japanese sandfish, Seabream, Goby, Anchovy, Alaska pollack, Mi-iuy croaker, Tongue sole, Japanese amberjack, Japanese sardinella, glass fish, Silver pomfret, Puffer, Silverbelly sea perch, Korean rockfish, Dark-banded rockfish, Whitespotted conger, Japanese Spanish mackerel, Black cow-tongue, Common mullet, Grub fish, Korean sandlance, Okhotsk atka mackerel, Japanese jack mackerel, Dotted gizzard shad, Sardine, Croaker, Slender Shad, Threadsail Filefish,

			Pacific herring, Skate ray, Alfonsino, Broadnose sevengill shark, pelagic tresher, Salmon shark, Shortfin mako, Piked dogfish, Smooth hammerhead, Silver chimaera, Blue shark, Blacktip reef shark, Sawedged perch, Inshore hagfish, Silver warehou, Southern hake, Black cod, Tunas (Bluefin tuna), Southern bluefin tuna, Albacore, Bigeye tuna, Yellowfin tuna, Longtail tuna, Skipjack tuna, black skipjack), Bullet tuna, Frigate tuna, Indo pacific sailfish, Striped marlin, Swordfish, 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 (<i>Urechis unicinctus</i>), 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

2. Common Standards and Specifications for General Foods

1. Standards for Food Ingredient

1) Requirements for Ingredients, etc.

- (1) Ingredients used for manufacturing of foods shall be collected, handled, processed, manufactured or managed for the purpose 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 or Fishery products, etc. cultivated or bred by utilizing biological engineering technologies such as technologies that artificially recombine genes or directly inject nucleic acids forming genes into cells or organelles within cells, or cell fusion technology beyond a family on the basis of taxonomy as ingredients, 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 shall 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 shall 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 sea areas that meet the sanitary standards for the designated sea areas pursuant to the "Sanitary

Standards for Water Quality for Shellfish Production Areas” (Notification 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 treat with natural purification capacity in order to reduce the microorganism level in oysters

** Artificial purification: A process to treat oysters with restricted 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 Fostorage 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.
- (24) Among food ingredients, fruits that are prohibited from using seeds can be used with seeds in the manufacturing and processing of foods if the seed becomes removed when consumed.

2) Standards for Determining Food Ingredients

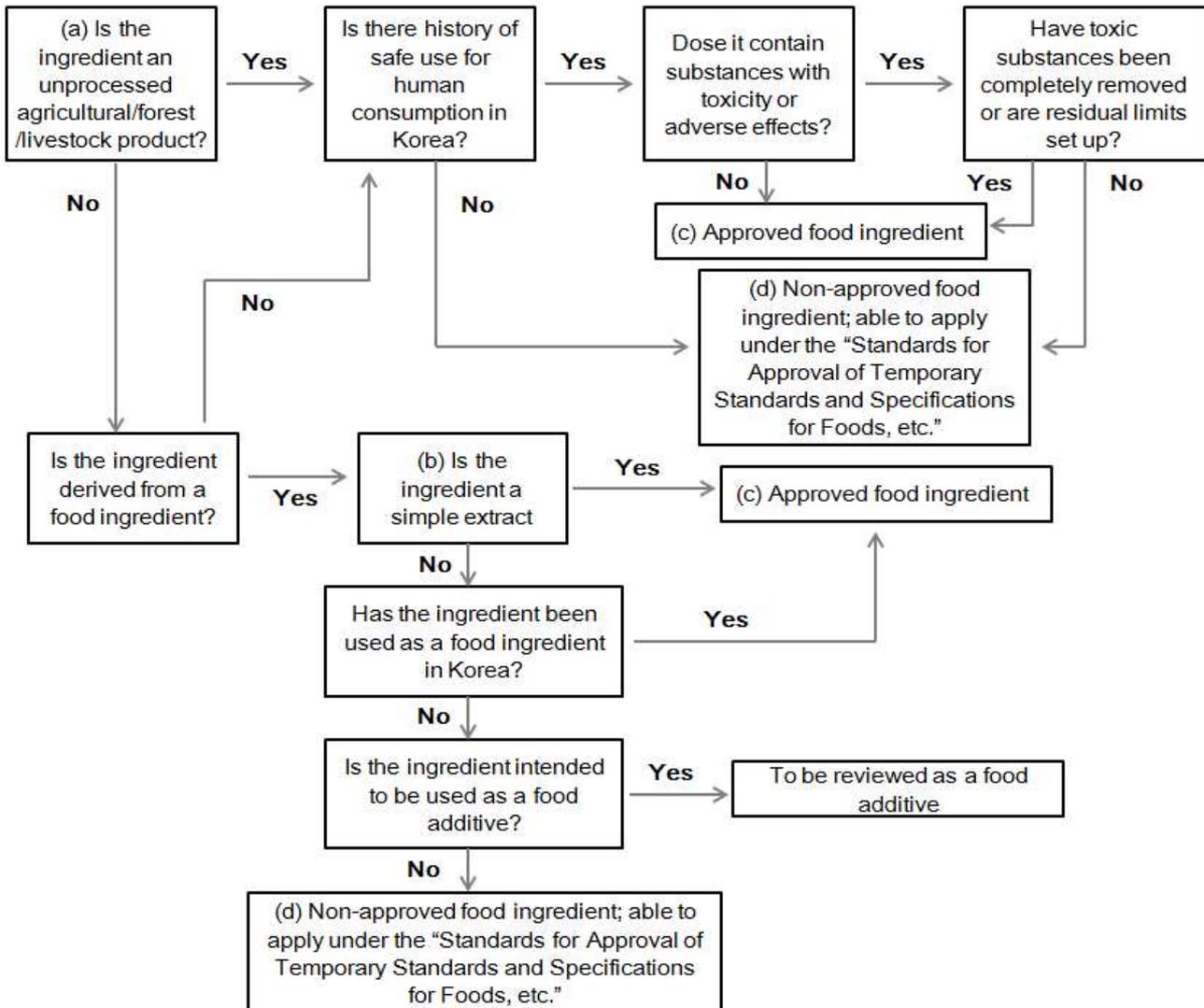
- (1) Any of the following shall not be used as a food ingredient in manufacturing, processing or preparing food; provided, however, that those approved by the Minister of Food and Drug Safety and those approved in accordance with the “Standards for Approval of Temporary Standards and Specifications 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 established for toxic or adverse effect-causing substances, documents relevant to the regulation and its reasoning; and content in 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.” (Relevant 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) “Ingredients Approved for Limited Use in Food” shall be used less than 50% of the total ingredients (excluding mixing water) based on the pre-processing weight of the ingredient.
 - (b) In case of mixing two or more of “Ingredients Approved for Limited Use in Food” in manufacturing of food, the total amount of the mixture shall be less than 50% (excluding mixing water), based on the pre-processing weight of such ingredients.
 - (c) Except, in cases of manufacturing products which are to be supplied to manufacturing businesses as ingredients and not sold to the final consumers, the above provisions (a) and (b) may not be applied.
 - (d) If only one ingredient of plant origin from “Ingredients Approved for Limited Use in Food” list is used in manufacturing of beverages, alcoholic beverages and spice products, such ingredient may be used up to 100% (excluding mixing water), based on the weight of the ingredient.

(8) Ingredients converted from Temporary Standards and Specifications

- ① The list of ‘Ingredients Converted from Temporary Standards and Specifications’, which is enlisted in Food Code after the approval as food ingredients pursuant to the “Standards for Approval of Temporary Standards and Specifications”, shall be as specified in [Annex 3].
- ② Ingredients classified as ‘Ingredients Converted from Temporary Standards and Specifications’ shall comply with the specified manufacturing (or use) conditions.

(9) 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 3] “Ingredients Converted from Temporary Standards and Specifications” 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 5. 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 5. 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) Foods 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 shall 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, soy sauces and pastes, seasoning food, processed saccharide products, beverages and processed fruits/vegetable product 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 or health functional foods.
- 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°C), high temperature short time pasteurization (for 15 to 20 seconds at 72~75°C), ultra high temperature sterilization (for 0.5 seconds to 5 seconds at 130~150°C), or other methods with equal or better effect. In addition, pasteurized products shall be cooled down to 10°C or below immediately after pasteurization; whereas sterilized products shall be filled and packaged in a sterilized container or package, using an aseptic filling process.
- 15) Pasteurized food products shall be heat-pasteurized for 30 minutes keeping their center temperature at 63°C 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°C 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) Among the products that require sterilization, acidic foods with a pH of 4.6 or less can be manufactured with pasteurization. In such cases, the product must comply with the specifications prescribed for sterilized products.
- 17) Unpasteurized products shall be managed in a manner conforming to the following standards or using a method with equal or better effect.
 - (1) Pork meat used as raw meat shall be cooled down to and maintained at 5°C 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°C.
- 18) The room temperature in the processing plants for processed meat products and packaged meat shall be maintained and managed at 15°C or below. (except for heat treatment plants)
- 19) Except in special cases during the process of processed meat product and packaged meat processing, such ingredients shall be processed as quickly as possible.
- 20) Fish parts other than flesh shall be stored, keeping the center temperature at -18°C or below after sufficiently removing inedible part.
- 21) Uncooked raw oysters shall be cleaned sufficiently with hygienic water promptly after harvested; and no food additives shall be used (except sodium hypochlorite).
- 22) 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.”
- 23) 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.

- 24) 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.
- 25) In case of using sea weed fusiforme or Gulf weed as an ingredient in food manufacturing and processing, they shall undergo processes to reduce inorganic arsenic before being used in food processing. Such processes include sufficiently cooking fresh sea weed fusiforme or Gulf weed in boiling water or sufficiently boiling after soaking dried fresh sea weed fusiforme or Gulf weed in water.
- 26) Fruits and vegetables used in processing of lunch boxes (*dosirak*) shall be sufficiently washed and disinfected with disinfectants approved as food additives, and then sufficiently washed with clean water. However, fruits and fruiting vegetables intended to be consumed after peeling and fruits and vegetables subjected to heat process after washing are excluded.
- 27) In case of lunch boxes (*dosirak*) which are distributed in refrigerated state, foods shall be rapidly cooled to refrigeration temperature (except for cooked rice) upon the completion of cooking before being filled into the lunch box container. However, this may not apply to cooked rice which is separately packaged and would not affect the temperature of side dishes.
- 28) In case of thawing frozen fishery products in water, it shall be done in a sanitary manner at 21°C or below.
- 29) In the case of grinding raw materials into metal shredders to manufacture powder, flour and pill, the process of removing metallic substances (iron powder) shall be carried out, after grinding(after final grinding, if subjected to multiple grinding), using magnets with sufficient magnetism. At this time, the powder, etc. attached to the magnet, shall be periodically removed during the removal process so that sufficient magnetism can be maintained at all times.
- 30) When washing eggs with water, they shall be washed in a way that satisfies all of the following requirements:
 - (1) The water shall be 30°C or higher and at least 5 °C higher than the egg's

temperature

- (2) The water shall contain 100~200 ppm sodium hypochlorite. If sodium hypochlorite is not used, a method with a sterilization effect equivalent or greater than 150 ppm sodium hypochlorite can be used.

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 the following foreign matters :

- ① Foreign matters present in food which exceed the degree that cannot be removed further
- ② Unsanitary foreign matters which are contaminated
- ③ Hard and sharp foreign matters that may cause harm to 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., which are present in small amount and have low potential risk are excluded.

(2) As metallic foreign matters, the amount of detected iron powder shall be less than 10.0 mg/kg in the food when tested in accordance with “Chapter 8. 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) 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
	Pasteurized product	Other than powder product				
Bacterial count	Sterilized product		5	0	0	-
Coliforms	Pasteurized product	Other than powder product	5	1	0	10

		Powder product	5	2	0	10
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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 Uncooked raw oysters : n=5, c=1, m=230, M=700 MPN/100g

(2) Foodborne Pathogens

A. According to the characteristics of foods, the specifications of foodborne pathogens are applied as following :

A) *Salmonella* spp., *Vibrio parahaemolyticus*, *Listeria monocytogenes*, Enterohemorrhagic *Escherichia coli*, *Campylobacter jejuni/coli*, *Yersinia enterocolitica*

Foods	Specifications
Meat (excluding those used as ingredients for manufacturing and processing) and processed foods which have been pasteurized or sterilized, or which are intended for direct consumption without further processing or cooking	n=5, c=0, m=0/25g

B) *Bacillus cereus*

Foods	Specifications
① Soy sauces and pastes (except <i>meju</i>), sauce, composite seasoning, <i>kimchi</i> products, salted and fermented seafood products, pickled food products and boiled foods among foods specified in A) above	Not more than 10,000 per gram (sterilized products shall be negative)
② Foods included in A) other than those specified in ①	Not more than 1,000 per gram (sterilized products shall be negative)

C) *Clostridium perfringens*

Foods	Specification
① Hams, sausages, meat extract products and egg products among foods specified in A) above	n=5, c=1, m=10, M=100 (sterilized products shall be n=5, c=0, m=0/25g)
② Raw hams, fermented sausages, natural cheese, processed cheese among foods specified in A) above	n=5, c=2, m=10, M=100 (sterilized products shall be n=5, c=0, m=0/25g)
③ Soy sauce (excluding <i>meju</i>), salted and fermented fish, red pepper powder, or shredded red pepper, or spices, <i>Kimchi</i> , pickled and boiled foods, composite seasoning, vinegar, curry powder and curry(excluding liquid products) among foods specified in A) above	n=5, c=2, m=100, M=1,000 (sterilized products shall be n=5, c=0, m=0/25g)
⑤ Foods included in A) other than those specified in ①, ②, and ③	n=5, c=0, m=0/25g

D) *Staphylococcus aureus*

Foods	Specifications
① Hams, sausages, meat extract products and dried fish/shellfish fillet products among foods specified in A) above	n=5, c=1, m=10, M=100 (sterilized products shall be n=5, c=0, m=0/25g)
② Raw hams, fermented sausages, natural cheese and processed cheese among foods specified in A) above	n=5, c=2, m=10, M=100 (sterilized products shall be n=5, c=0, m=0/25g)

③ Foods included in A) other than those specified in ① and ②	n=5, c=0, m=0/25g
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- B. In other meats and other processed animal food products, *Tubercule bacillus*, *Bacillus anthracis* and *Brucella* spp. shall be negative.
- C. In fishery products which are subjected to sanitary treatment, such as removing inedible parts (scales, gills and intestines, etc.) and cleaning, for direct consumption without further cooking, *Salmonella* spp. and *Listeria monocytogenes*, *Vibrio vulnificus*, *Vibrio cholerae* 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.
- D. *Salmonella* Enteritidis shall be detected in any edible eggs that are intended for direct human consumption without further processing or heating.
- E. In meat (applicable only 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 applicable only to ground meat), Enterohemorrhagic *Escherichia coli* shall be limited to n=5, c=0, m=0/25g.
- 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) Application of Limits for Contaminants

- ① The limits for heavy metals, shellfish poison and polychlorinated biphenyl (PCBs) in dried agricultural/forest/livestock/fishery products, where water content changes due to drying process, shall be converted and applied on a fresh weight basis considering such changes in water content.
- ② The limits for radioactivity in dried agricultural/forest/livestock/fishery products,

which are not intended for direct consumption, shall be converted and applied on a fresh weight basis considering the changes in water content.

- ③ For processed products which do not have separate limits established for contaminants such as heavy metals, mycotoxins and shellfish poisons, the limits set for relevant agricultural/forest/livestock/fishery products shall be applied according to the content of ingredients. In case where water content changes due to drying process, the limits shall be applied considering such water content.
- ④ For processed products which are intended to be consumed after dilution and already have limits set for heavy metals, radioactivity, dioxin and polychlorinated biphenyl (PCBs), the limits shall be applied reflecting the condition of the product at the time of consumption (manufacturer's consumption direction).

(2) 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 (applicable only to rice)*
Tuberous and corm vegetables		Not more than 0.1	Not more than 0.1	-
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	Not more than 0.3	-
	Oilseeds	Not more than 0.3 (applicable only to sesame and perilla)	Not more than 0.2 (applicable only to sesame)	-
Fruits		Not more than 0.1	Not more than 0.05	-
Leafy vegetables (including flowerhead brassicas)		Not more than 0.3	Not more than 0.2	-
Stalk 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 and	Not more than 0.1 (not more than 0.05 for onions; not more than	-

	wood-cultivated ginseng; not more than 0.2 for balloon-flower, bonnet bellflower)	0.2 for ginseng and wood-cultivated ginseng)	
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 (applicable only to cultivated mushrooms, oyster mushrooms, king oyster mushrooms, oak mushrooms, pine mushrooms, winter mushrooms and tree ear)	Not more than 0.3 (applicable only 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 kidney	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)
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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 only to freshwater and pelagic fishes) Not more than 0.2 (applicable only to marine fishes)	Not more than 0.5 (Fishes specified in (a) below are excluded)	Not more than 1.0 (applicable only to fishes specified in (a) below)
Mollusks	Not more than 2.0 (however, not more than 1.0 for squid, not more than 2.0 for long arm octopus with viscera)	Not more than 2.0 (however, not more than 1.5 for squid, not more than 3.0 for long arm octopus with viscera)	Not more than 0.5	-
Crustaceans	Not more than 0.5 (however, not more than 2.0 for swimming crabs with viscera)	Not more than 1.0 (however, not more than 5.0 for swimming crabs with viscera)	-	-
Algae	Not more than 0.5 [applicable only to sea mustard (including sporophyll of sea mustard)]	Not more than 0.3 [applicable only to laver (including seasoned laver) or sea mustard (including sporophyll of sea mustard)]	-	-
Frozen edible fish heads	Not more than 0.5	-	Not more than 0.5 (Fishes specified in (a) below are excluded)	Not more than 1.0 (applicable only to fishes specified in (a) below)
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 (Fishes specified in (a) below are excluded)	Not more than 1.0 (applicable only to fishes specified in (a) below)

- ③ Marine fishes subjected to the application of methylmercury limit : Species in Sebastidae (red fish included, littoral fish excluded), Alfonsino, Broadnose sevengill shark, Pelagic thresher, Salmon shark, Shortfin mako, Piked dogfish, Smooth hammerhead, Silver chimera, Blue shark, Blacktip shark, Sawedged perch, Pink cusk-eel, Black oreo (*Allocyttus niger*), Smooth oreo dory (*Pseudocyttus maculatus*), Orange roughy (*Hoplostethus atlanticus*), Opah, Inshore hagfish (littoral fish excluded), Silver warehou, Pantagonian toothfish, Southern hake (limited to populations of the Netherlands), Black cod, tunas, Indo pacific sailfish, Striped marlin, Black marlin, Indian spearfish, Swordfish, Bullet tuna and Frigate tuna

④ Processed Foods

Commodity	Lead (mg/kg)	Arsenic (mg/kg)	Inorganic arsenic (mg/kg)
① Vegetable fats and oils, other animal fats and oils, blended edible oil, flavored oil, processed fat and oil, shortening, margarine	Not more than 0.1	Not more than 0.1	-
② Fish oil	Not more than 0.1	-	Not more than 0.1*
③ Infant milk formulas, follow-up milk formulas, infant formulas, follow-up formulas, cereal formulas for infants/young children, other foods for infants/young children, special formulas for infants/young children	Not more than 0.01 [In case of powder products, the standard shall be applied by considering the consumption after dilution (manufacturer's recommended intake method)]	-	Not more than 0.1* (applicable only to foods processed with unpolished rice, rice bran, embryo bud of rice, sea weed fusiforme or gulf weed)
④ Foods for special medical purpose (except for special formulas for infants/young children),	-	-	

confectionery, cereals, noodles			Not more than 0.1* (applicable only to foods processed with unpolished rice, rice bran, embryo bud of rice, sea weed fusiforme or gulf weed)
<div style="border: 1px dashed black; padding: 5px;"> <p><MFDS Notice 2020-114, Nov. 26, 2020> (Enforcement date : Jan. 1, 2022)</p> <p>○ Foods for special medical purpose (except for special formulas for infants/young children), confectionery, cereals, noodles</p> </div>			
⑤ All food except for ②, ③, ④ above	-	-	Not more than 1* (applicable only to foods processed with unpolished rice, rice bran, embryo bud of rice, sea weed fusiforme or gulf weed)

* In case the result of total arsenic exceeds the inorganic arsenic limit, the product shall be tested for inorganic arsenic.

⑤ Edible insects

Commodity	Limits (on a dry weight basis)		
	Lead (mg/kg)	Cadmium (mg/kg)	Inorganic arsenic (mg/kg)
Edible insects	Not more than 0.1 (however, not more than 0.3 for <i>Allomyrina dichotoma</i> larvae and <i>Protaetia brevitarsis</i> larvae)	Not more than 0.1	Not more than 0.1*

* In case the result of total arsenic exceeds the inorganic arsenic limit, the product shall be tested for inorganic arsenic.

(3) Mycotoxin Limits

① Total aflatoxin (Sum of B₁, B₂, G₁ and G₂)

Commodity		Limit (µg/kg)
Ingredients of plant origin*		Not more than 15.0 (however, not more than 10.0 for B ₁)
Processed foods	Infant formulas, follow-up formulas, baby foods for infant/young children	Not more than 0.10 (applicable only to B ₁)
	Other foods**	Not more than 15.0 (however, not more than 10.0 for B ₁)

* Refers to ingredients of plant origin other than those specified in Chapter 1. General Provisions, 4) Classification of Food Ingredients, 1) Ingredients of Plant Origin

** All processed foods other than Infant formulas, follow-up formulas, baby foods for infants/young children

② Aflatoxin M₁

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, baby foods for infants/young children and special formulas for infants/young children)	Not more than 0.025
<div style="border: 1px dashed black; padding: 5px;"> <p><MFDS Notice 2020-114, Nov. 26, 2020> (Enforcement date : Jan. 1, 2022) Milk formulas (infant milk formulas, follow-up milk formulas); products containing milk components, among foods for special dietary use (infant formulas, follow-up formulas, baby foods for infants/young children and special formulas for infants/young children)</p> </div>	[For powder products, the limit shall be applied by considering 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, baby 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 and sorghum	Not more than 4
Simply treated sorghum (by grinding, cutting, etc.)	
Simply treated maize (by grinding and cutting, etc.)	Not more than 2
Processed cereal products containing 50% or more of simply treated maize or sorghum;	Not more than 1
Cereals	
Processed maize products for popcorn	

⑤ Ochratoxin A

Commodity	Limit (µg/kg)
Grains	Not more than 5.0
Simply treated grain products (by grinding and cutting, etc.)	
Coffee beans, roasted coffee	Not more than 10.0
Instant coffee	
<i>Meju</i> (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
Nutmeg, turmeric, pepper	Not more than 15.0
Seasoning foods containing nutmeg, turmeric or pepper	
Infant formulas, follow-up formulas, and baby foods for infants/young children	Not more than 0.50

⑥ Deoxynivalenol

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

⑦ Zearalenone

Commodity	Limit (µg/kg)
Grains	Not more than 100 (not more than 200 for maize used for the production of starch or starch sugar)
Simply treated grain products (by grinding and cutting, etc.)	
Confectionery	Not more than 50
Infant formulas, follow-up formulas, baby foods for infants/young children	Not more than 20
Cereals	Not more than 50

(4) 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

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

(6) Benzo(a)pyrene

- ① Edible fat and oil (Vegetable fats and oils, fish oil, other animal fats and oils, blended edible oil, flavored oil, processed fat and oil, shortening, margarine) :
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 be applied only in cases where 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

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- ⑧ 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

(7) 3-MCPD (3-Monochloropropane-1,2-diol) Limit

Commodity	Limit
Acid hydrolyzed soy sauce, blended soy sauce (applicable only to those manufactured by mixing acid hydrolyzed soy sauce or its undiluted solution)	Not more than 0.1 mg/kg <MFDS Notice 2020-3, Jan. 14

	, 2020> (Enforcement date : Jan. 1, 2022) Not more than 0.02 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, etc. through chemical processing such as acid hydrolysis (except enzyme hydrolysis).

(8) Melamine Limit

Commodity	Limit
○ Infant milk formulas, follow-up milk formulas, Infant formulas, follow up formulas, baby foods for infants/young children and foods for special medical purposes etc., among foods for special dietary use	Not detected
<MFDS Notice 2020-114, Nov. 26, 2020> (Enforcement date : Jan. 1, 2022) ○ Infant milk formulas, follow-up milk formulas, Infant formulas, follow up formulas, baby foods for infants/young children and foods for special medical purposes	
○ All foods and food additives other than those specified above	Not more than 2.5 mg/kg

(9) Shellfish Poison Limit

① Paralytic shellfish poisons

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

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

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

③Amnesic shellfish poison (Domoic acid)

Commodity	Limit (mg/kg)
Shellfish	Not more than 20
Crustacean	

(10) Maximum Radioactivity Limit

Nuclides	Commodity	Limit (Bq/kg, L)
¹³¹ I	All foods	Not more than 100
¹³⁴ Cs + ¹³⁷ Cs	Infant formulas, follow-up formulas, baby foods for infants/young children, special formulas for infants/young children, Infant milk formula, follow-up milk formula, milk and milk products, ice creams	Not more than 50
	Other foods*	Not more than 100

* Other foods refer to all foods except infant formulas, follow-up formulas, baby foods for infants/young children, special formulas for infants/young children and milk and milk products and ice cream.

6) Food Irradiation Standard

- (1) The rays available for food irradiation shall be gamma ray, electron ray, or X-ray
- (2) ⁶⁰Co may be used as a source of gamma rays; and an electron beam accelerator, as a source of electron beams and X-ray.
- (3) In the event of using gamma ray energy emitted from ⁶⁰Co, such energy shall not exceed the absorbed dose for each food item permitted to be irradiated.
- (4) In the case of food irradiation using an electronic accelerator, the electron ray shall be irradiated below 10 MeV and the X-ray shall be irradiated below 5 MeV (7.5 MeV, in case that the X-ray conversion metal is Gold or Tantalium), and shall not exceed each item's absorbed dose permitted for food irradiation.
- (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	Not more than 0.15
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		
<div style="border: 1px solid black; padding: 5px;"> <p><MFDS Notice 2020-114, Nov. 26, 2020> (Enforcement date : Jan. 1, 2022)</p> <p>Dried spices and their preparations Composite seasoning Sauce Leached teas Powder teas Food for special medical purpose</p> </div>		
	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 commodities

- ① The MRLs for pesticide in agricultural commodities is shown in [Annex 4] and it means not more than that limit. However, when there are individual MRL and group MRL, individual MRL shall be applied first
- ② If MRLs for pesticide residues in agricultural commodities are not set in [Annex 4], default MRL of 0.01 mg/kg will be adapted.
- ③ Components of the active ingredients contained in the pesticide registered for use in the ‘Pesticide Control Act’ or legally used in foreign countries under the laws of the country may be exempted from setting MRLs for the following reasons. And the ingredients to be exempted are shown in the table below.
 - Ⓐ Ingredients that are unlikely to cause harm to the human body due to their low toxicity
 - Ⓑ Ingredients that do not remain in food at all
 - Ⓒ Ingredients that are difficult to distinguish from those contained in foods due to their natural presence.
 - Ⓓ Safety-guaranteed natural plant protection (microorganisms, etc.) ingredients

No.	Active Components
1	1-Methylcyclopropene
2	Machine oil
3	Decylalcohol
4	<i>Monacrosporium thaumasium</i> KBC3017
5	<i>Bacillus subtilis</i> DBB1501
6	<i>Bacillus subtilis</i> CJ-9
7	<i>Bacillus subtilis</i> M 27
8	<i>Bacillus subtilis</i> MBI600
9	<i>Bacillus subtilis</i> Y1336
10	<i>Bacillus subtilis</i> EW42-1
11	<i>Bacillus subtilis</i> JKK238

12	<i>Bacillus subtilis</i> GB0365
13	<i>Bacillus subtilis</i> KB401
14	<i>Bacillus subtilis</i> KBC1010
15	<i>Bacillus subtilis</i> QST713
16	<i>Bacillus amyloliquefaciens</i> KBC1121
17	<i>Bacillus pumilus</i> QST2808
18	Bordeaux mixture
19	<i>Beauveria bassiana</i> GHA
20	<i>Beauveria bassiana</i> TBI-1
21	<i>Bacillus thuringiensis</i> subsp. aizawai
22	<i>Bacillus thuringiensis</i> subsp. aizawai NT0423
23	<i>Bacillus thuringiensis</i> subsp. aizawai GB413
24	<i>Bacillus thuringiensis</i> subsp. kurstaki
25	<i>Bacillus thuringiensis</i> var. kurstaki
26	Calcium polysulfide, lime sulfur
27	<i>Streptomyces goshikiensis</i> WYE324
28	<i>Streptomyces colombiensis</i> 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	<i>Ampelomyces quisqualis</i> AQ94013
36	Oxyethylene methyl siloxane
37	Gibberellin A ₃ , Gibberellin A ₄₊₇
38	Calcium carbonate
39	Copper sulfate basic
40	Copper sulfate tribasic
41	Copper oxychloride
42	Copper hydroxide
43	<i>Trichoderma harzianum</i> YC 459
44	<i>Paenibacillus polymyxa</i> AC-1
45	<i>Paecilomyces fumosoroseus</i> 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	polynaphthyl methane sulfonic + polyoxyethylene fatty acid ester
53	Sodium ligno sulfonate
54	<i>Simplicillium lamellicola</i> BCP
55	<i>Trichoderma atroviride</i> SKT-1
56	Paraffin, Paraffinic oil

57	Pelargonic acid
58	Ethyl formate
59	Tea tree oil
60	Copper sulfate, pentahydrate
61	Polyoxin D

(2) Application of 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 0.2 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).

(3) Application of pesticide MRLs for processed foods

When pesticides are detected in processed foods for which no MRLs are set in [Annex 4], the pesticide MRL is applied as follows.

- ① Residues may be permitted within the scope of the MRLs of the raw agricultural products; 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; 8 times of the MRL in fresh ginseng, to ginseng and red ginseng concentrates; and 10 times of MRL in herbs, to dried herbs respectively.]

8) Maximum Residual Limits (MRLs) for Veterinary Drugs

(1) Application of veterinary drug MRLs in foods

- ① Any veterinary drugs and substances prescribed by the head of the Ministry of Food and Drug Safety as harmful to the human body prohibited from manufacture or import due to identified safety 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 Foods* ¹	
	Name of substance	Definition of residue
1	Nitrofurans	
	- Furazolidone	3-Amino-2-oxazolidinone(AOZ)
	- Furaltadone	3-Amino-5-morpholinomethyl-2-oxazolidinone (AMOZ)
	- Nitrofurazone	- Semicarbazide(SEM) : apply only to the edible parts of non-heated livestock products and fishery products of animal origin (including simple cuts and excluding crustaceans) - Nitrofurazone : applicable only to crustacean
	- Nitrofurantoin	1-Aminohydantoin(AHD)
	- Nitrovin	Nitrovin
2	Carbadox	Quinoxaline-2-carboxylic acid (QCA)
3	Olaquinox	3-methyl quinoxaline-2-carboxylic acid (MQCA)
4	Chloramphenicol	Chloramphenicol
5	Chlorpromazine	Chlorpromazine
6	Clenbuterol	Clenbuterol
7	Colchicine	Colchicine
8	Dapsone	Dapsone is the sum of dapsone and monoacetyl dapson
9	Diethylstilbestrol, DES	Diethylstilbestrol
10	Medroxyprogesterone acetate, MPA	Medroxyprogesterone acetate
11	Thiouracil	Tiouracil is the sum of 2-thiouracil, 6-methyl-2-thiouracil, 6-propyl-2-thiouracil and 6-phenyl- 2-thiouracil
12	GentianViolet, Gystal violet	Gentian violet is the sum of Gentian violet and Leuco –gentian violet
13	Malachite green	Malachite green is the sum of Malachite green and Leuco-malachite green
14	Methylene Blue	Methylene Blue is the sume of Methylene blue and Azure B
15	Dimetridazole	Dimetridazole is the sum of Dimetridazole and 2-hydroxymethyl-1-methyl-5-nitroimidazole (HMMNI)
16	Ipronidazole	Dimetridazole is the sum of Dimetridazole

		and 2-hydroxymethyl-1-methyl-5-nitroimidazole (HMMNI)
17	Metronidazole	Metronidazole is the sum of 1-(2-hydroxyethyl)-2-hydroxymethyl-5-nitroimidazole(Metronidazole-OH)
18	Ronidazole	Ronidazole is the sum of Ronidazole and 2-hydroxymethyl-1-methyl-5-nitroimidazole(HM MNI)
19	Norfloxacin	Norfloxacin
20	Ofloxacin	Ofloxacin
21	Pefloxacin	Pefloxacin
22	Pyrimethamine	Pyrimethamine
23	Vancomycin	Vancomycin
24	Roxarsone	Roxarsone
25	Arsanilic acid	Arsanilic acid

<MFDS Notice 2021-26, Mar. 25, 2021> (Enforcement date : Apr. 1, 2022)

No.	Substances that shall not be detected in Foods* ¹	
	Name of substance	Definition of residue
26	Salbutamol	Salbutamol

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

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 limits 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.

<MFDS Notice 2021-54, Jun. 29, 2021> (Enforcement date : Jan. 1, 2024)

⑤ No more than 0.01 mg/kg shall be applied to “cattle, swine, chicken, milk and egg” in livestock and “fish” in fishery products unless its Maximum Residue Limit (MRL) is specified in this notification. However, ‘not detected’ shall be applied to growth promoters (ingredients used for accelerating growth, increasing weight, etc.) and steroidal anti-inflammatory drugs.

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

<MFDS Notice 2021-54, Jun. 29, 2021> (Enforcement date : Jan. 1, 2024)

⑥ For any food animals other than those specified in ⑤ above 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 not more than 0.03 mg/kg.

<MFDS Notice 2020-40, May. 27, 2020> (Enforcement date : Jan. 1, 2022)

(c) The MRLs for antimicrobials in livestock/fishery products (including milk and eggs) and honey (including royal jelly and propolis) shall be not more than 0.01 mg/kg.

(2) Veterinary Drug MRLs in Food shall be as shown in [Annex 5] and it means not more than that limit.

(3) Exemption from the veterinary drug MRLs in food

In accordance with the laws of the relevant country with animal medicines and foreign countries permitted under the Pharmaceutical Affairs Act, the establishment of residual acceptance criteria may be exempted if any of the following reasons apply to the valid ingredients contained in legally used

animal medicines, and components subject to exemption shall be as shown in [Annex 8].

- ① Any of the following normal components, such as human- ingested food, food additives, or animal- ingested food
 - (a) What is prescribed by the Food Sanitation Act as raw materials and food additives of food
 - (b) What is prescribed by the Livestock Products Sanitary Control Act as livestock products
 - (c) What is prescribed by the Health Functional Food Act as a Health Functional Food
 - (d) Standard and specification of feed, etc. (Notified by the Ministry of Agriculture, Food and Rural Affairs) Short-mixed and auxiliary feed prescribed in Articles 4 and 5

- ② In case that it is a clear ingredient that does not normally harm the human body and is not any of the following:
 - (a) Substances that can be consumed by humans as biopharmaceuticals or used as raw materials for medicines
 - (b) Substances or components normally produced in the animal's body or present in the natural system and contained in the animal's body
 - (c) Components that are quickly decomposed and discharged from the animal's body and do not remain in food (unless they are toxic to metabolites)
 - (d) Other substances determined by the head of the Ministry of Food and Drug Safety that have secured safety

9) Maximum Residual Limits (MRLs) for residual substances in livestock and fishery products

(1) Application of MRLs for residual substances in livestock and fishery products

- ① They refer to limits set for residual control of pesticide ingredients, such as insecticide and disinfectants, which are not permitted for direct use on relevant livestock and fishery products but occurred due to unintentional contamination (feed, environmental contamination, etc.). and they shall be as

shown in [Annex 6] and it means not more than that limit.

- ② For livestock products, edible animal by-products (e.g. intestines, bones, heads, tails, feet, shells, blood, fat, and fish eggs), which are not separately named in [Annex 6], shall meet the concerned animal's "muscle (meat)" standard, and in case of no "muscle (meat)", the minimum standard for the concerned animal shall be applied, and in the case of fishery products, MRL for "fish" shall be applied

(2) Applicable scope of MRLs for residual substances

- 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.

(3) Application of MRLs for residual substances of processed foods

- ① Food manufactured and processed with livestock and fishery products determined by MRL may be allowed to remain within the scope of MRL for raw food. In other words, the standard of the material is applied according to the content of the material, and applied considering the moisture content in case of the moisture content changing due to the process of drying, etc.

(4) Exemption from MRLs for residual substances

- ① For the preceding (1) of 7) components subject to exemption from MRL set out in the pesticide MRL ③ for agricultural products, MRL for residual substances of livestock and fishery products shall be exempted

10) 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	Hydroxyvardenafil
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	Cinnamylidenafil
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
51	Isopropylnortadalafil
52	Descarbonsildenafil
53	Dithiopropylcarbodenafil
54	Desulfonylchlorosildenafil
55	Desmethylpiperazinylpropoxysildenafil

② Anti-obesity drugs and their analogues

No.	Compound name
1	Sibutramine
2	Orlistat
3	Desmethylsibutramine
4	Didesmethylsibutramine
5	Chlorosibutramine
6	Chlorosipentramine

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
7	Phenolphthaleine
8	Yohimbine
9	Icarine
10	Sennoside
11	Cascaroside

11) δ -9-Tetrahydrocannabinol(THC) and Cannabidiol (CBD) Limit

- (1) Hemp seeds: Not more than 5 mg/kg of THC, Not more than 10 mg/kg of CBD
- (2) Hemp seed oil: Not more than 10 mg/kg of THC, Not more than 20 mg/kg of CBD

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°C)	1.028~1.034 (15°C)
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	-
Water test	Water shall not be added	-

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 (applicable only to mackerels, tunas, salmons, Pacific sauries, Pacific herrings, anchovies, Japanese Spanish mackerels, sardines, bullet tunas, frigate tuna and Japanese amberjack)

(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	<i>Takifugu niphobles</i> , <i>Takifugu alboplumbeus</i>
2	<i>Takifugu poecilonotus</i> , <i>Takifugu flavipterus</i>
3	<i>Takifugu pardalis</i>
4	<i>Takifugu snyderi</i>
5	<i>Takifugu porphyreus</i>

	Scientific name
6	<i>Takifugu obscurus</i>
7	<i>Takifugu chrysops</i>
8	<i>Takifugu rubripes</i>
9	<i>Takifugu chinensis</i>
10	<i>Takifugu xanthopterus</i>
11	<i>Lagocephalus inermis</i>
12	<i>Lagocephalus wheeleri, Lagocephalus spadiceus</i>
13	<i>Lagocephalus gloveri, Lagocephalus cheesemanii</i>
14	<i>Sphoeroides pachygaster</i>
15	<i>Takifugu flavidus</i>
16	<i>ChiLomycterus affinis, ChiLomycterus reticulatus</i>
17	<i>Diodon holocanthus</i>
18	<i>Diodon liturosus</i>
19	<i>Diodon hystrix</i>
20	<i>Ostracion immaculatus</i>
21	<i>Takifugu stictonotus</i>

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

4. Preservation and Distribution Standards

1) General Principles

- (1) All food (including ingredients used for manufacturing food) shall be hygienically handled, preserved and distributed, and the place of such preservation and distribution shall be maintained in a sanitized condition.
- (2) A place where food is preserved and distributed shall be thoroughly controlled to prevent exposure to rats and insects.
- (3) Food shall be properly managed to prevent mix-ups of products and contamination by harmful pollutants and foreign matters (including mold, etc.), and the work area must be protected from direct sunlight, rain, snow, etc.
- (4) Foods shall not be preserved and distributed together with chemicals, pesticides, poisonous or toxic chemicals, etc., that are harmful to the human body.
- (5) Food shall be preserved and distributed separately from other food and food additives that may affect the flavor and taste of such food, or other items that may contaminate such food or affect the quality thereof.

2) Preservation and Distribution Temperature

- (1) Products without preservation and distribution instruction specified on the product shall be preserved and distributed at room temperature, away from direct sunlight
- (2) Food that cannot be preserved for 7 days or more at normal temperature shall be preserved and distributed in refrigerated or frozen facilities when possible.
- (3) Unless its preservation and distribution temperature is specified in this notification, a room temperature product shall be preserved and distributed at 1~35°C; a normal temperature product at 15~25°C; a refrigerated product at 0~10°C; a frozen product at -18°C or below; and a heat storage product at 60°C or above. However, this may not be applicable in the following cases.
 - ① In the case of transporting frozen products to consumers (except for the products intended to be used for business), the temperature may exceed -18°C, but even in this case, no part of the frozen products shall be melted.
 - ② Fish for canned food that is frozen with salt water can be transported at

9°C or lower, but during transportation, the temperature shall be maintained by using a sanitary container, cover, etc.

(4) Products of which the preservation and distribution temperature is specified below shall be preserved and distributed at the specified temperature.

	Type of foods	Preservation and distribution temperature
①	(a) Raw milk (b) Milks, processed milks, goat milks, butter milk, concentrated milks and whey products that are pasteurized. (c) Soybean curd and <i>muk</i> (starch jellies) (except for those hermetically sealed soy bean curd and <i>muk</i>) (d) Eggs washed with water	Refrigerated
②	(a) Seasoned <i>jeotkal</i> (b) Processed soybean curd (except for sterilized product or baked or fried Other processed fish meat products with water content of 15% or below) (c) Pasteurized soy milks (except for pasteurized products with pH 4.6 or below) (d) Processed fish meat products (except for sterilized product or baked or fried Other processed fish meat products with water content of 15% or below) (e) Egg products (except liquid egg products) (f) Fermented milks (g) Cheeses (h) Butters (i) Uncooked raw oysters (j) Meat ingredient and fishery products of animal origin (h) Fresh cut products(except for salad products)	Refrigerated or Frozen
	<div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: fit-content;"> <p><MFDS Notice 2020-40, May. 27, 2020> (Enforcement date : Jan. 1, 2022)</p> </div> (i) Meal kit (including meal kit products)	

	among foods for special medical purposes) containing meat, other meat or fishery products as ingredients	
③	(a) Meat(except for ground meat, poultry meat) (b) Packaged meat(except for packaged meat of ground meat or poultry meat) (c) Processed meat products(except for ground meat products) (d) Other meat	Refrigerated(-2~10℃) or Frozen
④	(a) Meat(applicable only to ground meat, poultry meat) (b) Packaged meat(applicable only to packaged meat of ground meat or poultry meat) (c) Processed meat products	Refrigerated(-2~5℃) or Frozen
⑤	(a) Fresh cut products(applicable only to salad products) (b) Smoked salmon (c) Egg products(applicable only to liquid egg products)	Refrigerated(0~5℃) or Frozen
⑥	(a) Perishable ingredients, such as olive pulp for extra virgin olive oil, etc., (b) Ices	-10℃ or below

(5) Notwithstanding provisions ① through ⑤ of (4), sterilized or dried processed meat products, or milks processed to prevent spoilage such as water removal, sugar addition, sugaring, salting, etc., processed milk, goat milk, butter oil, concentrated milk, wheys, fermented milk, cheese, butter, and processed egg products may not be refrigerated or frozen. And, soybean curd and *muk* (except for hermetically sealed soybean curd and *muk*), if the transportation takes less than 4 hours, shall be preserved and distributed by exchanging water that meets the drinking water quality standards whenever possible.

(6) Edible eggs shall be preserved and distributed at 0 to 15℃, and the refrigerated eggs shall be continuously preserved and distributed by refrigeration.

3) Preservation and Distribution method

(1) Refrigerated, frozen or heat storage products shall be transported in facilities

such as a refrigerated or freezer vehicle that is capable of maintaining proper temperature, or by other means with equivalent or better effect.

(2) Products with a risk of absorbing moisture shall be carefully handled to avoid such absorption.

(3) Refrigerated products shall not be preserved or distributed at room temperature, while room temperature or refrigerated products shall not be preserved or distributed from a freezer. However, a room temperature or refrigerated product can be preserved or distributed from a freezer within the expiration date if it falls under any of the following:

① Dried fish/shellfish fillet products

② If a product is packaged to prevent moisture absorption and contains less than 15% moisture, and its manufacturer/processor has labeled that the product can be frozen

③ Sauce, soy sauces, edible fats and oils or spice products in a package unit of 20g or less that is packaged together with frozen food as a complement

④ Among pasteurized or sterilized beverage, or fermented milk, its manufacturer/processor has labeled that the product can be frozen for sales (except for those packaged in glass bottles and carbonated drinks)

⑤ According to provisions ③ ~ ④, frozen room temperature products or refrigerated products shall not be preserved and distributed after thawing (except for products falling under ② above)

(4) Frozen products shall not be distributed as room temperature or refrigerated products after thawing. However, this may not be applicable if the product is separately labeled with the frozen packaging completion date, thawing date, and expiration date (within the expiration date as a frozen product) from the thawing date under the distribution conditions, and the case falls under any of following:

① Where a manufacturer/processor preserves and distributes frozen breads, rice cakes, chocolates, salted and fermented seafood products, fruit/vegetable juice or other processed fishery products (applicable only to those hermetically sealed after sterilization or pasteurization) as room temperature or refrigerated products after thawing

- ② Where a dairy products operator among livestock product processing businesses preserves and distributes frozen cheese or butter as room temperature or refrigerated products after thawing
- ③ Where frozen fishery products are thawed, and then preserved and distributed as refrigerated products in Modified Atmosphere Packaging (MAP) in order to suppress the growth of microorganisms and maintain quality

<MFDS Notice 2020-98, Oct. 16, 2020> (Enforcement date : Jan. 1, 2022)

(5) Where a food manufacturer/processor thaws, or cuts after thawing frozen meat or frozen fishery products to make them as ingredients for meal kit (including simple meal kit for special medical purposes), and it is indicated that frozen meat or frozen fishery products have been thawed and used, such thawed frozen meat or frozen fishery products may be preserved and distributed under refrigeration without re-freezing. However, it is limited to products of which the meat content is less than 60% (less than 50% for ground meat).

- (6) Frozen fishery products may only be preserved and distributed under refrigeration within 24 hours after thawing. At this time, the thawed fishery products shall not be re-frozen.
- (7) Thawed frozen products shall not be re-frozen. However, this may not be applicable to the following work being performed, but it shall be frozen immediately after such work.
 - ① When thawing frozen fishery products to remove inedible parts, such as the internal organs or contaminating foreign matters, or to select, cut, or subdivide, etc.
 - ② When thawing frozen meat to cut or remove bones, etc
- (8) Raw oysters shall be preserved and distributed in a container with a lid (synthetic resin or aluminum box or water-resistant container).
- (9) When importing, storing, preserving, or transporting fruit concentrates, etc. by ship, a specific temperature should be kept for each facility: -5°C or below for storage tanks; 0°C or below for in-house storage tanks; and 0°C or below for tank lorry. Also, conveyor lines shall be cleaned; and materials and

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

- (10) When transporting or packaging products, special care shall be given in order not to damage the container or package, and to avoid giving massive impact whenever possible. In addition, canned products shall be preserved and distributed in a way to prevent their outside from becoming rusty.
- (11) Packaged livestock products shall not be sold by subdivision except in the following cases, and if a livestock product is subject to labeling and does not have a label, it shall not be purchased or sold.
 - ① Where meat sales businesses, or on-site meat sales and processing businesses sell the packaged meat by re-cutting or subdividing
 - ② Where on-site meat sales and processing businesses manufacture, or sell by subdividing processed meat products (excluding canned/bottled food)

4) Setting Expiration date

- (1) The business operators who can set the expiration date of products are as follows
 - ① Food manufacturing/processing business
 - ② On-site sales manufacturing/processing business
 - ③ Livestock product (meat, milk, eggs) processing business
 - ④ On-site meat sales and processing business
 - ⑤ Meat packaging business
 - ⑥ Wholesale egg distributors
 - ⑦ Wholesale egg distributors
 - ⑧ Importers (only in cases where the preservation and distribution temperature of an imported refrigerated food is different from that of the domestic market and it is required to preserve and distribute the product under domestic temperature conditions; or the importer sets a new expiration date within the one set by the manufacturer)
- (2) The expiration date of a product shall be determined to prevent harm and

ensure quality by considering the characteristics of products, such as packing materials, preservation conditions, manufacturing methods and ingredient mixing ratios; and other distribution circumstances, such as refrigeration or freezing preservation.

- (3) “Expiration date” shall be calculated from the completion of packaging (but, for a product that goes through manufacturing processes after packaging, from the completion of final processing); and for a capsule product, from the completion of charging/filling. However, the expiration date of eggs shall be calculated from the ‘laying date’.
- (4) For frozen products that are thawed to release (breads, rice cakes, chocolates, salted and fermented seafood products, fruit/vegetable juices, cheeses, butters, or processed fishery products (limited to those hermetically sealed after sterilization or pasteurization)), the expiration date shall be calculated from the thawed date.
- (5) For a packaged set of products with different expiration dates, such as a gift set, and for products subject to simple processing that does not change the preservability of ingredients, such as just cutting or binding using food, the earliest expiration date of any ingredient shall be the expiration date of the finished product.
- (6) A product sold in subdivision shall follow the expiration date of the ingredient of the original product subdivided

Chapter 3

Standards and Specifications for Foods Labelled and Sold as Those Intended for Infants/Young Children or for Elderly

3. Standards and Specifications for Foods Labelled and Sold as Those Intended for Infants/Young Children or for Elderly

1. Food labelled and sold as those intended for infants/young children

1) Definition

“Foods labelled and sold as those intended for infants/young children” refer to foods which are labelled and sold as those intended for infants or young children among foods which fall under 1. Confectioneries, Breads or Rice cakes ~ 23. Prepared meals (except those belong to Foods for special dietary uses). These foods are intended to be consumed directly or after mixing with foods, or after simple cooking process such as heating.

2) Requirements for Ingredient, etc

3) Manufacturing/Processing Standards

- (1) They shall be pasteurized or sterilized in order to prevent microbial risks.
- (2) Liquid products among infants products (including products intended for infant/young children) shall be manufactured as sterilized products. (However, milks, processed milks and fermented milks are excluded)
- (3) When honey or maple syrup is used as an ingredient, it shall be treated in a way that destroys the spores of *Clostridium botulinum*.
- (4) Cocoa may be used in the products intended for young children of 12 months or older; and the amount of use shall not be more than 1.5%. (for those intended to be consumed after dilution, this applies based on the time of consumption.
- (5) Tar colors and sodium saccharin shall not be used.
- (6) Products shall be manufactured according to the standards specified for baby foods intended for infants/young children in 5) Contaminants of Chapter 2. Common standards and Specifications for General Foods, 3. Standards and Specifications for General Foods.

4) Specifications

- (1) Hygiene Indicator Bacteria & Foodborne Pathogens

Specifications Item	Product property	n	c	m	M
Bacterial count	① Sterilized product	5	0	0	-
	② Powdered products intended for infants under 6 months	5	2	1,000	10,000
	Foods other than those specified in ① and ② above (except powdered products or products containing lactic acid bacteria, cheeses)	5	1	10	100
Coliforms (except sterilized products)		5	0	0	-
<i>Bacillus cereus</i> (except sterilized products)		5	0	100	-
<i>Cronobacter</i> spp. (applicable only to infant products, excluding sterilized products)		5	0	0/60g	-

- (2) Sodium (mg/100g) : Not more than 200 (however, not more than 300 in cheeses; and for products intended to be consumed after dilution or mixing, standard shall be applied reflecting the manufacturer’s suggested method of consumption)

2. Foods Labelled and Sold as Those Intended for Elderly

1) Definition

“Foods labelled and sold as those intended for elderly(Elderly friendly foods)” refer to foods which are labelled and sold as those intended for elderly among foods which fall under 1. Confectioneries, Breads or Rice cakes ~ 24. Other foods (except other processed foods). These foods are the manufactured and processed food by adjusting the nature of food, treating it as an ingredient or form that is easy to digest, or adjusting nutrients to help elderly eat or digest food.

2) Requirements for Ingredient, etc.

3) Manufacturing/Processing Standards

- (1) They shall be manufactured and processed in consideration of the ability of the elderly to consume, digest, absorb, metabolize, excretion, etc.
- (2) To prevent microbial risks, fruits and vegetables should be thoroughly washed with clean water after sterilizing with disinfectant permitted as a food additive (except fruit or vegetables that are removed from the shell, and fruits or

vegetables that have a post-heating process).

- (3) When meat, edible egg, or animal products are used as raw materials, they shall be heated to be fully cooked.
- (4) It shall be manufactured and processed in accordance with either of the following in order to help the elderly eat food:
 - ① In order for 3 or more of the nutrients of protein, vitamin A, C, D, riboflavin, niacin, calcium, potassium, and dietary fiber per 100 g to be at least 10% of the recommended intake or sufficient intake which 8. General Test Method 12. Annex 12.10 Korean Nutrition Standards suggests, raw foods shall be combined or nutrient shall be added. However, if it is specified that the product is intended for a specific gender or age group, the nutrition standards for the relevant population group may be used.
 - ② They shall be manufactured to a hardness of 500,000 N/m² or less to make it easier for the elderly to consume.

4) Specifications

- ① Coiliforms: n=5, c=0, m=0 (applicable only to pasteurized products)
- ② *Escherichia coli*: n=5, c=0, m=0 (applicable only to non-pasteurized products)
- ③ Hardness: 500,000 N/m² or less (hardness control products only)
- ④ Viscosity: 1,500 mpa·s or more (hardness of 20,000 N/m² or less is limited to viscosity controlled liquid products)

Chapter 4

**Standards and Specifications
for Long Shelf-life Foods**

Chapter 4. Standards and Specifications for Long Shelf-life Foods

1. Canned/bottled Foods

“Canned/bottled food” refers to manufactured, processed or sanitized food that has been degassed, sealed, sterilized or pasteurized in a can or bottle, for the purpose of preserving and distributing at room temperature for more than 12 months.

1) Manufacturing/Processing Standards

- (1) For sterilization, products shall be heat-treated with the center temperature at 120°C or higher for 4 minutes or more, or by other methods that are equivalent or more effective.
- (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 (applicable only 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 food” refers to manufactured, processed or cooked food that has been heated to sterilize or pasteurize after being filled and hermetically sealed in a

pouch- or other type of container that is made with a single layer plastic film or metal foil, or bonded multi-layer thereof, for the purpose of preserving and distributing the manufactured, processed or sanitarily treated food at room temperature for more than 12 months.

1) Manufacturing/Processing Standards

- (1) For sterilization, products shall be heated, keeping the center temperature at 120°C for 4 minutes, or using alternative methods with equivalent or better effect.
- (2) 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.
- (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.
- (5) 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 colors : 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°C or above for 30 minutes, or using alternative methods with equivalent or better effect.

2) Specifications (except for meat, packaged meat, milk products, processed meat products, processed egg products, processed meat containing product (unpasteurized), 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 5

Standards and Specifications for Each Food Products

Chapter 5. 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.

③ The length of the longest straight line connecting the two points in the jelly is more than 5.5 cm and the weight of the jelly is more than 60 g.

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

① Konjac, glucomannan

(3) In case candies are manufactured by coating their surfaces with citric acid and malic acid, etc. for sour taste, the coating material shall be diluted so that the citric acid and malic acid, etc. components are less than 50% (as the sum in case various acids are mixed together).

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 indulgence product that is manufactured by processes such as molding, of ingredients containing a large amount of saccharides, sugar-alcohol, bean paste or fruit juice 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 (applicable only to fried/oil treated confectionery; for *hangwa* (Korean traditional sweets), not more than 3.0)
- (2) Tar colors other than those permitted : Shall not be detected (applicable only to candies, chewing gum and breads)
- (3) Antioxidant (g/kg) : No antioxidants shall be detected except for the following (applicable only 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.)
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(4) 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; applicable only to breads)
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(5) Bacterial count : n=5, c=2, m=10,000, M=50,000 (applicable only to sealed products of confectionery and candies; excluding fermented and lactic acid bacteria-containing products)

(6) *Staphylococcus aureus* : n=5, c=0, m=0/10 g [However, applicable only to breads that are directly consumed as they have not been heat sterilization after applying or filling with cream (refers to those produced by adding other foods and food additives to milk, eggs, milk cream, edible fats and oils as main ingredients and subsequently going through processes such as mixing or aeration).]

(7) *Salmonella* spp. : n=5, c=0, m=0/10 g [However, applicable only to breads that are directly consumed as they have not been heat sterilization after applying or filling with cream (refers to those produced by adding other foods and food additives to milk, eggs, milk cream, edible fats and oils as main ingredients and subsequently going through processes such as mixing or aeration).]

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

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

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

- (11) Total acid (as citric acid, w/w%) : Not more than 6.0 (applicable only to candies; and not more than 4.5 for those coated with coating materials on surface for sour taste)
- (12) Total aflatoxin ($\mu\text{g}/\text{kg}$) : Not more than 15.0 (as the sum of B₁, B₂, G₁ and G₂; however, B₁ shall not exceed 10.0 $\mu\text{g}/\text{kg}$. Only applicable to Confectionery, Candies and Chewing gum containing peanuts and nuts)
- (13) Fumonisin (mg/kg) : Not more than 1 (as the sum of B₁ and B₂; only applicable to Confectionery, Candies and Chewing gum containing not less than 50% of maize)
- (14) Lead (mg/kg) : Not more than 0.2 (only applicable to Candy)

6) Test Methods

(1) Acid value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.1 Acid Value.”

(2) Tar colors other than those permitted

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(3) Antioxidant

Test in accordance with “Chapter 8. General Test Methods, 3.3 Antioxidant.”

(4) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(5) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(6) *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 in accordance with “Chapter 8. General Test Methods, 4.12 *Staphylococcus Aureus*, 4.12.1 Qualitative Test.”

(7) *Salmonella* spp.

Take 10 g of cream at random from a product coated or filled with cream. Test in accordance with to “Chapter 8. General Test Methods, 4.11 *Salmonella* spp.”

(8) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(9) Lactic acid bacteria count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count.”

(10) Crushing strength

Test in accordance with “Chapter 8. General Test Methods, 1.5 Tests for Physical Properties of Jelly.”

(11) Total acid

Take 1~5 g of homogenized sample, add 50 mL of distilled water and completely dissolve by shaking. This solution is used as a test solution. Calibrate the pH meter with each buffer solution of pH 4.01, 7.00 and 10.01. After adjusting the temperature of test solution to the temperature of buffer solution used for calibration, use electrode of the calibrated pH meter to agitate and titrate it with 0.1 N sodium hydroxide solution until it reaches pH 8.2. Identify the consumed 0.1 N sodium hydroxide solution and calculate the total acid using the following equation. Find the result value from the averages values resulted from three repetitions of the experiment.

1 mL of 0.1 N sodium hydroxide solution = 0.0064 g C₆H₈O₇

$$\text{Total acid (w/w\%)} = \frac{0.0064 \times V \times f}{S} \times 100 \text{ (as citric acid)}$$

V : Consumed amount of 0.1 N NaOH (mL)

f : Factor of 0.1 N NaOH

S : Sample amount (g)

(12) Aflatoxin

Test in accordance with “Chapter 8. General Test Methods, 9.2 Mycotoxin.”

(13) Fumonisin

Test in accordance with “Chapter 8. General Test Methods, 9.2 Mycotoxin.”

(14) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 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 (*Livestock products)

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 lactobaccillus, 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.
- (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 in accordance with “Chapter 8. General Test Methods.”

2-2 Ice Cream Mixes (*Livestock products)

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 per 1 mL (only applicable to products containing lactic acid bacteria);

Not less than 3,000,000 per 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 in accordance with “Chapter 8. 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°C 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

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial count.”

(2) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Lactic acid bacteria count

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 refer to coca mass, cocoa butter, cocoa powder derived from cacao seeds, or other processed cocoa products using these as main ingredients.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

- (1) Alcohol shall not be added. However, alcohol may be used to enhance flavor, but in this case, less than 1% of alcohol shall remain in the product.

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

It refers to products made by simply processing cacao seeds, such as pressing and grinding, or processed and manufactured products by mixing food or food additives with ingredients, such as cocoa mass, cocoa butter, and cocoa powder, obtained from cocoa seeds. However, those falling under the category

of chocolates, confectioneries, breads, rice cakes or frozen desserts are excluded.

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 in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(2) Iodine value

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.3 Iodine Value.”

(3) *Salmonella* spp.

Test in accordance with “Chapter 8. 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 shall not be added. However, alcohol may be used to enhance flavor, but in this case, less than 1% of alcohol shall remain in the product.

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 other than those 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 other than those permitted
Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”
- (2) Bacterial count
Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”
- (3) Lactic acid bacteria count
Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count.”
- (4) *Salmonella* spp.
Test in accordance with “Chapter 8. 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 (g/kg)	Less than 0.020
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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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.4.1.3 Sucrose, C. Polarimetry.”

(2) Sodium saccharin

Test in accordance with “Chapter 8. General Test Methods, 3.2.1 Sodium Saccharin.”

(3) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(4) Sulfur dioxide

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.4.1.3 Sucrose.”

(2) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(3) Sodium saccharin

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 6.2.1 Oligosaccharide.”

(2) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3.2.1 Sodium Saccharin.”

(3) Dextrin powder

Test in accordance with “Chapter 8. General Test Methods, 6.2.2 Glucose.”

(4) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3.2.1 Sodium Saccharin.”

(4) Lead

Test in accordance with “Chapter 8. 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 starchy ingredients such as grain flour and starch.

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 in accordance with “4-4. Glucose, 6) Test Methods, (1) Dextrose Equivalent (D.E).”

(2) Sodium saccharin

Test in accordance with “Chapter 8. General Test Methods, 3.2.1 Sodium

Saccharin.”

(3) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

4-7 Processed Saccharide Product

1) Definition

Processed saccharide product refers to products produced using sugars, glucose, fructoses, taffies, sugar syrups, oligosaccharides, honeys, etc. 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) Coliforms : $n=5, c=1, m=0, M=10$ (only applicable to pasteurized products)

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

(3) *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) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(2) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) *Escherichia coli*

Test in accordance with “Chapter 8. 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;	Not more than 1.0 (as propionic acid)

Calcium propionate	
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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(2) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(3) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 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 vacuum 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 jellies) means products processed by using starch ingredients, algae or konjac (*Amorphophallus konjac*) as main ingredients.

5) Specifications

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

(2) Tar colors : Shall not be detected.

6) Test Methods

(1) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4.7 Coliforms.”

(2) Tar colors

Test in accordance with “Chapter 8. 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

It refers to crude oil obtained from soybeans and treated to be fit for human consumption. and includes soybean oil and high oleic acid soybean oil

(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

Type Item	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(75~95 for high oleic acid soybean oil)	103~130	95~127	92~115

Type Item	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})

Type Item	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)

Type Item	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.	
	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.)	
	Butylated hydroxyanisole (BHA); Dibutyl hydroxy toluene; Tert-butylhydroquinone	Propyl gallate

Type Item	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

Type Item	Coconut oil	Hot pepper seed oil	Other vegetable fats and oils
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(1) Acid value	Not more than 0.6 (not more than 4.0 for pressed oil)	Not more than 0.6 (not more than 3.0 for pressed oil)	Not more than 0.6 (not more than 4.0 for pressed oil)	
(2) Peroxide value	-	-	-	
(3) Iodine value	7~11	120~139	-	
(4) 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

6) Test Methods

(1) Acid value

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.1 Acid Value.”

(2) Iodine value (Wijs method)

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.3 Iodine Value.”

(3) Cooling test

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.3.1.1 Cooling Test.”

(4) Antioxidant

Test in accordance with “Chapter 8. General Test Methods, 3.3 Antioxidant.”

(5) Peroxide value

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.5 Peroxide Value.”

(6) Linolenic acid

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.4 Fatty Acid.”

(7) Erucic acid

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.4 Fatty Acid.”

7-2 Animal Fats and Oils (*Livestock products, excluding Fish oil and Other 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; and include 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 fats and oils shall go through refinement by degumming, deacidification, decolorization and deodorization, or other combined refining processes with equal or better effect. (However, raw beef tallow and raw lard are excluded)
- (2) Krill oil obtained from Antarctic krill (*Euphausia superba*) shall be manufactured and processed to contain not less than 30 w/w% of phospholipid.

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) Fish oil

It refers to crude oil obtained from fishes, crustaceans and mollusks among fishery products and treated to be fit for human consumption.

(6) 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; except for those categorized according to the above food types (1)~(5).

5) Specifications

Item \ Type	Edible beef tallow	Edible lard	Raw beef tallow	Raw lard	Fish oil	Other animal fats and oils
(1) Specific gravity (40 °C/20°)	0.893 ~ 0.904	0.894 ~ 0.906	-	-	-	-
(2) Refractive gravity (40 °C)	1.448 ~ 1.460	1.448 ~ 1.461	-	-	-	-
(3) Water (%)	Not more than 0.3		Not more than 0.7		-	-
(4) Unsaponifiable matter (%)	Not more than 1.2		-	-	-	-
(5) Acid value	Not more than 0.3		Not more than 4.0		Not more than 3 (Not more than 45 for krill oil)	Not more than 0.6 (Not more than 4.0 for pressed oil)
(6) Peroxide value	-		-		Not more than 5	-
(7) Saponification value	190 ~ 202	192 ~ 203	-	-	-	-
(8) Iodine value	32 ~ 50	45 ~ 70	-	-	-	-
(9) 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
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6) Test Methods

Test in accordance with “Chapter 8. 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 trans-esterification 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

Type	Blended edible oil		Flavored oil
Item			
(1) Acid value	Not more than 0.6 (not more than 4.0 for pressed oil)		Not more than 3.0
(2) Peroxide value	-		
(3) Iodine value	-		-
(4) Tar colors	-		Shall not be detected
(5) Antioxidant (g/kg)	No antioxidants shall be detected except for the following		
	Butylated hydroxyanisole (BHA);	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)	
	Dibutyl hydroxy toluene;		
	Tert-butylhydroquinone		
	Propyl gallate	Not more than 0.1	

Type Item	Processed fat and oil	Shortening	Margarine	
(1) Crude fat (%)	-	-	Not less than 80.0 (Except for low fat margarine, which shall be not less than 10.0 and not more than 80.0)	
(2) Acid value	Not more than 0.6	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.)	Not more than 1.0 (except where milk fat or lecithin or glycerin esters of fatty acids, etc. are used.)	
(3) Peroxide value	Not more than 3.0	-	-	
(4) Tar colors	-	-	Shall not be detected	
(5) 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	
	-	-	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:	
			Sodium	Not more than 0.5

			dehydroacetic acid	(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 2.0 (as sorbic acid)
			When used in combination with the above (benzoic acid and sorbic acid-type) preservatives;	Not more than 2.0 [as the sum of benzoic acid and sorbic acid. However, for low fat margarine (fat spread), not more than 1.0 as the sum of benzoic acid]

Type Item	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 other than those permitted	Shall not be detected	-

Type Item	Other edible fat and oil products
(1) Acid value	Not more than 3.0
(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) <i>Escherichia coli</i>	n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products for direct consumption without further processing or heating)
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6) Test Methods

(1) Acid value

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.1 Acid Value.”

(2) Peroxide value

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.5 Peroxide Value.”

(3) Iodine value (Wijs method)

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.3 Iodine Value.”

(4) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(5) Antioxidant

Test in accordance with “Chapter 8. General Test Methods, 3.3 Antioxidant.”

(6) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(7) Crude fat

Test in accordance with “Chapter 8. 6.3.1.2 Crude fat.”

(8) Water

Test in accordance with “Chapter 8. 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.

(9) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(10) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(11) Bacterial count

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(2) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(3) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(4) Coliforms

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(2) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(3) Cadmium

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(4) Tin

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(5) Bacterial Count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological

Test Methods, 4.5.1 General Bacterial Count.”

(6) Coliforms

Test in accordance with “Chapter 8. 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 other than those permitted : Shall not be detected
- (4) Bacterial count : $n=5, c=1, m=100, M=1,000$ (only applicable to direct consumption without further manufacturing and processing in liquid product; ; those with non-fat milk solids of not less than 4% shall be $n=5, c=2, m=10,000, M=50,000$. However, sterilized products shall be $n=5, c=0, m=0$)
- (5) Coliforms : $n=5, c=1, m=0, M=10$ (only applicable to direct consumption without further manufacturing and processing in liquid product).

6) Test Methods

(1) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(2) Tin

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(3) Not allowed tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(4) Bacterial Count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Coliforms

Test in accordance with “Chapter 8. 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, fruit/vegetable 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 decomposition of nitric acid method in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals, 9.1.2 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 8. General Test Methods, 9.1 Heavy Metals, 9.1.2 B. Preparation of Test Solution.”

② Test operation

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals, 9.1.2 C. Measurement.”

(2) Tin

Test in accordance with “Chapter 8. General Test Methods, 9.1 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(5) *Escherichia coli*

Using the above test solution prepared for (3) Bacterial Count, test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(6) Preservatives

Test in accordance with “Chapter 8. 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; when used in combination with sorbic acid, potassium sorbate or calcium sorbate, the sum of benzoic acid and sorbic acid shall not be more than 0.6; and the usage as sorbic acid shall not be more than 0.5. However, it shall not be detected in carbonated water)
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<p>Sorbic acid; Potassium sorbate; Calcium sorbate;</p>	<p>Not more than 0.5 (as sorbic acid; when used in combination with benzoic acid, sodium benzoate, potassium benzoate or calcium benzoate, the sum of sorbic acid and benzoic acid shall not be more than 0.6; and the usage as sorbic acid shall not be more than 0.5. However, it shall not be detected in carbonated water)</p>
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(1) Gas pressure

Test in accordance with “Chapter 8. General Test Methods, 6.4.1.1 Gas Pressure.”

(2) Lead and Cadmium

Test in accordance with “9-3. Fruit/Vegetable Drinks, 6) Test Methods, (1) Lead and Cadmium.”

(3) Tin

Test in accordance with “9-3. Fruit/Vegetable Drinks, 6) Test Methods, (2) Tin.”

(4) Bacterial count

Test in accordance with “9-3. Fruit/Vegetable Drinks, 6) Test Methods, (4) General Bacterial Count.”

(5) Coliforms

Test in accordance with “9-3. Fruit/Vegetable Drinks, 6) Test Methods, (5) Coliforms.”

(6) Preservatives

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5. General Bacterial Count.”

(2) Coliforms

Test in accordance with “Chapter 8. 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.)
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6) Test Methods

(1) Lactic acid bacteria or yeast count

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Preservatives

Test in accordance with “Chapter 8. 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 shall 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; when used in combination with Methyl ρ -Hydroxybenzoate or Ethyl ρ -Hydroxybenzoate, the sum of usage as benzoic acid and usage as parahydroxybenzoic acid shall not be more than 0.6; and the usage as parahydroxybenzoic acid shall not be more than 0.1)
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 or calcium benzoate, the sum of usage as parahydroxybenzoic acid and usage as benzoic acid shall not be more than 0.6; and the usage as parahydroxybenzoic acid shall not be more than 0.1)

6) Test Methods

(1) Ginseng/red ginseng components

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(3) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(4) Tin

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(5) Bacterial Count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(6) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Preservatives

Test in accordance with “Chapter 8. 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 in accordance with “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 in accordance with “9-3. Fruit/Vegetable Beverages, 6) Test Methods, (1) Lead and Cadmium, etc.”

(3) Tin

Test in accordance with “9-3. Fruit/Vegetable Beverages, 6) Test Methods, (2) 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 in accordance with “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 in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) Lactic acid bacteria count

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.9 Lactic Acid Bacteria Count.”

(7) Preservatives

Test in accordance with “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.

<MFDS Notice 2020-00, 000. 00, 2020> (Enforcement date : Jan. 1, 2022)

10. Special Nutritional Foods

Special nutritional foods 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, obese people or pregnant/lactating women, etc. Such foods include: milk formulas; infant formula; follow-up formula; baby foods for infants/young children; weight control formula; and foods for pregnant/lactating women.

10-1 Milk Formulas (*Livestock products)

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 aseptically 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 added quality shall be based on breast milk as a reference.

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
	Max. 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

Items \ Type	Infant milk formula		Follow-up milk formula
		Max. recommended standard	
(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 (μ g/100 kcal or IU/100 kcal)	60 ~ 180 or 200 ~ 600		75 ~ 225 or 250 ~ 750
(11) Vitamin D (μ g/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 B1 (μ g/100 kcal)	Not less than 60	300	Not less than 40
(14) Vitamin B2 (μ g/100 kcal)	Not less than 80	500	Not less than 60
(15) Niacin (μ g/100 kcal)	Not less than 300	1500	Not less than 250
(16) Vitamin B6 (μ g/100 kcal)	Not less than 35	175	Not less than 45
	(However, if the amount of protein is 2.3 g or more, vitamin B6 shall increase at least by 15 μ g per additional gram of protein.)		(However, if the amount of protein is 3.0 g or more, vitamin B6 shall increase at least by 15 μ g per additional gram of protein.)
(17) Folic acid (μ g/100 kcal)	Not less than 10.0	50	Not less than 4.0
(18) Pantothenic acid (μ g/100 kcal)	Not less than 400	2000	Not less than 300
(19) Vitamin B12 (μ g/100 kcal)	Not less than 0.1	1.5	Not less than 0.15
(20) Vitamin K1 (μ g/100 kcal)	Not less than 4.0	27	Not less than 4.0
(21) Biotin (μ g/100 kcal)	Not less than 1.5	10	Not less than 1.5

Items	Type	Infant milk formula		Follow-up milk formula
			Max. recommended standard	
(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.)		(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
(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=0, M=10 (except sterilized products)		
(39) <i>Cronobacter</i> spp.		n=5, c=0, m=0/60 g		-

Items \ Type	Infant milk formula	Follow-up milk formula
	Max. recommended standard	
	(except sterilized products)	
(40) Carbide (scorched particle)	Not more than 7.5 mg/100 g	
(41) <i>Bacillus cereus</i>	n=5, c=0, m=100 (except sterilized products)	
(42) <i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
(43) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
(44) <i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	
(45) <i>Clostridium perfringens</i>	n=5, c=0, m=0/25g	

※ Vitamin A₁ μg=3.33 IU; Vitamin D₁ μg=40 IU; Vitamin E₁ 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 in accordance with “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 shall not be used as a protein source.
- (2) Raw ingredients shall not be irradiated.
- (3) Cocoa shall 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 aseptically 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 added quality shall be based on breast milk as a reference.
- (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 shall 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 (μ gRE/100 kcal or IU/100 kcal) : 75~150 or 250~500
- (10) Vitamin D (μ g/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 B₁ (µg/100kcal) : Not less than 40
- (13) Vitamin B₂ (µg/100kcal) : Not less than 60
- (14) Niacin (µg/100 kcal) : Not less than 250
- (15) Vitamin B₆ (µg/100kcal) : Not less than 35 (However, if the amount of protein is 2.3 g or more, vitamin B₆ 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 B₁₂ (µg/100kcal) : Not less than 0.1
- (19) Vitamin K₁ (µg/100kcal) : Not less than 4.0
- (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 in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Calorie

Test in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.6 Calculation of Calories.”

(3) Crude protein

Test in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(4) Crude fat

Test in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.1 Crude Fat.”

(5) Linoleic acid

Test in accordance with “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(6) α -Linolenic acid

Test in accordance with “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(7) The Ratio of linoleic acid to α -linolenic acid

Test in accordance with “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(8) Carbohydrate

Test in accordance with “Chapter 7. General Test Methods, 2.1 General Component Test Methods.”

(9) Vitamin A

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.1 Vitamin A.”

(10) Vitamin D

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.7 Vitamin D.”

(11) Vitamin C

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.4 Vitamin C.”

(12) Vitamin B₁

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.2 Vitamin B₁.”

(13) Vitamin B₂

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.3 Vitamin B₂.”

(14) Niacin

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.5 Niacin.”

(15) Vitamin B₆

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.9 Vitamin B₆ (Pyridoxine); or 2.2.2.12.2 Vitamin B₆.”

(16) Folic acid

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.3 Folic Acid.”

(17) Pantothenic acid

Test in accordance with “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 B₁₂

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.11 Vitamin B₁₂; or 2.2.2.12.5 Vitamin B₁₂.”

(19) Vitamin K₁

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.8 Vitamin K₁.”

(20) Biotin

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.7 Biotin.”

(21) Choline

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.6 Choline.”

(22) Vitamin E

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.6 Vitamin E.”

(23) Sodium

Test in accordance with “Chapter 7. General Test Methods, 1.2 Micronutrient Test Methods, 1.2.1.6 Sodium.”

(24) Potassium

Test in accordance with “Chapter 7. General Test Methods, 1.2 Micronutrient Test Methods, 1.2.1.7 Potassium.”

(25) Chlorine

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Mineral Components, 2.2.1.14 Chlorine.”

(26) Calcium

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.2 Calcium.”

(27) Phosphorus

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.3 Phosphorus.”

(28) Magnesium

Test in accordance with “Chapter 7. General Test Methods, 2.2.1.15 Magnesium.”

(29) Iron

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.4 Iron.”

(30) Iodine

Test in accordance with “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, 9.1 Heavy Metals, 9.1.2 B. Preparation of Test Solution, 2) Dry Ashing Method,” and test in accordance with “9.1.2 C. Measurement, Test by using: 1) Inductively Coupled Plasma Mass Spectrometry, ICP-MS, 2) Inductively Coupled Plasma Optical Emission Spectrometry, ICP-OES, or 3) Atomic Absorption Spectrometry, AAS

(32) Zinc

Test in accordance with “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, 9.1 Heavy Metals, 9.1.2 B. Preparation of Test Solution, 2) Dry Ashing Method,” and test in accordance with “9.1.2 C. Measurement, 1) Inductively Coupled Plasma Mass Spectrometry, ICP-MS, 2) Inductively Coupled Plasma Optical Emission Spectrometry, ICP-OES, or 3) Atomic Absorption Spectrometry, AAS”

(34) Selenium

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient

Test Methods, 2.2.1.10. Selenium.”

(35) Sodium saccharin

Test in accordance with “Chapter 7. General Test Methods, 3.2.1 Sodium saccharin.”

(36) Tar colors

Test in accordance with “Chapter 7. General Test Methods, 3.4 Color Additives.”

(37) Bacterial count

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(38) Coliforms

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(39) *Cronobacter* spp.

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp.”

(40) *Bacillus cereus*

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(41) Carbide

Test in accordance with “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 aseptically 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 added quality shall be based on breast milk as a reference.
- (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 shall 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 ($\mu\text{gRE}/100$ kcal or IU/100 kcal) : 75~225 or 250~750
- (7) Vitamin D ($\mu\text{gRE}/100$ kcal or IU/100 kcal) : 1.0~3.0 or 40~120
- (8) Vitamin C (mg/100kcal) : Not less than 8
- (9) Vitamin B₁ ($\mu\text{g}/100\text{kcal}$) : Not less than 40
- (10) Vitamin B₂ ($\mu\text{g}/100\text{kcal}$) : Not less than 60
- (11) Niacin ($\mu\text{g}/100\text{kcal}$) : Not less than 250
- (12) Vitamin B₆ ($\mu\text{g}/100\text{kcal}$) : Not less than 45 (However, if the amount of protein is 3.0 g or more, vitamin B₆ shall increase at least by 15 μg per additional gram of protein.)
- (13) Folic acid ($\mu\text{g}/100\text{kcal}$) : Not less than 4.0
- (14) Pantothenic acid ($\mu\text{g}/100\text{kcal}$) : Not less than 300

- (15) Vitamin B₁₂ (µg/100kcal) : Not less than 0.15
- (16) Vitamin K₁ (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) : Not less than 5.0
- (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 in accordance with “Chapter 7. General Test Methods, 2. Food

Component Test Methods, 2.1.1 Water.”

(2) Calorie

Test in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.6 Calculation of Calories.”

(3) Crude protein

Test in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(4) Crude fat

Test in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.5.1 Crude Fat.”

(5) Linoleic acid

Test in accordance with “Chapter 7. General Test Methods, 2.1.5.4 Fatty Acid.”

(6) Vitamin A

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.1 Vitamin A.”

(7) Vitamin D

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.7 Vitamin D.”

(8) Vitamin C

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.4 Vitamin C.”

(9) Vitamin B₁

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.2 Vitamin B₁.”

(10) Vitamin B₂

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.3 Vitamin B₂.”

(11) Niacin

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.5 Niacin.”

(12) Vitamin B₆

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.9 Vitamin B₆ (Pyridoxine); or 2.2.2.12.2 Vitamin B₆.”

(13) Folic acid

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.3 Folic Acid.”

(14) Pantothenic acid

Test in accordance with “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 B₁₂

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.11 Vitamin B₁₂; or 2.2.2.12.5 Vitamin B₁₂.”

(16) Vitamin K₁

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.8 Vitamin K₁.”

(17) Biotin

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.12.7 Biotin.”

(18) Vitamin E

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2.6 Vitamin E.”

(19) Sodium

Test in accordance with “Chapter 7. General Test Methods, 1.2 Micronutrient Test Methods, 1.2.1.6 Sodium.”

(20) Potassium

Test in accordance with “Chapter 7. General Test Methods, 1.2 Micronutrient Test Methods, 1.2.1.7 Potassium.”

(21) Chlorine

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Mineral Components, 2.2.1.14 Chlorine.”

(22) Calcium

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.2 Calcium.”

(23) Phosphorus

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.3 Phosphorus.”

(24) Magnesium

Test in accordance with “Chapter 7. General Test Methods, 2.2.1.15 Magnesium.”

(25) Iron

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.4 Iron.”

(26) Iodine

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.9 Iodine.”

(27) Zinc

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.8 Zinc.”

(28) Selenium

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.10. Selenium.”

(29) Sodium saccharin

Test in accordance with “Chapter 7. General Test Methods, 3.2.1 Sodium Saccharin.”

(30) Tar colors

Test in accordance with “Chapter 7. General Test Methods, 3.4 Color Additives.”

(31) Bacterial count

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(32) Coliforms

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(33) *Bacillus cereus*

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(34) Carbide

Test in accordance with “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 Baby foods for infants/young children

1) Definition

Baby foods for infants/young children refers to products, such as porridge, gruel or puree, paste products (or products which become this state after mixing with water, milk, etc.) manufactured and processed to assist infants and young children to adapt to foods during the weaning or development period.

2) Requirement 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 mixture of nitrogen and carbon dioxide; liquid products for babies and infants shall be sterilized and aseptically 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 to be added shall be based on breast milk as a reference.
- (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 shall 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 (applicable only to powder and solid products)
- (2) Gelatinization degree (α) (%) : Not less than 80.0 (applicable only to powder and solid products containing 25% or more grains, pulses, tuberos and corm vegetables, etc., or their products; excluding those intended to be consumed after heat treatment)
- (3) Sodium (mg/100g) : Not more than 200 (for products intended to be consumed after mixing with water, it shall be based on the mixed state 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; excludes powdered products)
- (8) *Cronobacter* spp. : n=5, c=0, m=0/60g (applicable only to products for infants; excludes sterilized products)
- (9) *Bacillus cereus* : n=5, c=0, m=100 (except for sterilized products)

6) Test Methods

(1) Water

Test in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Gelatinization degree (α)

Test in accordance with “10-4 Cereal Formula for Infants/Young Children, 4)

Test Methods, (4) Gelatinization Degree (α).”

(3) Sodium

Test in accordance with “Chapter 7. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.6 Sodium.”

(4) Sodium saccharin

Test in accordance with “Chapter 7. General Test Methods, 3.2.1 Sodium saccharin.”

(5) Tar colors

Test in accordance with “Chapter 7. General Test Methods, 3.4 Color Additives.”

(6) Coliforms

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Bacterial Count

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(8) *Cronobacter* spp.

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp.”

(9) *Bacillus cereus*

Test in accordance with “Chapter 7. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

10-5 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 shall 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, B₁, B₂, B₆, 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, B₁, B₂, B₆, 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 B₁, B₂, B₆, 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, B₁, B₂, B₆, 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 (KDRI) 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; baby 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 milk formulas, infant formulas; follow-up formulas; baby 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

Type Item	Foods for patients	Foods for patients with congenital metabolic disorders
(1) Water (%)	Not more than 10.0% (only applicable to powder products)	
(2) Calorie	-	-
(3) Crude protein	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)	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. (however, where necessary to limit the amount due to characteristics of the disease, not more 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	
(11) <i>Bacillus cereus</i>	n=5, c=0, m=100	

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 amount; however, for selenium, not more than 9 µg/100 kcal, for chromium and molybdenum, not more than 10 µg/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) <i>Cronobacter</i> spp.	n=5, c=0, m=0/60g (only applicable to powder products for infants under 6 months of age)	
(11) <i>Bacillus cereus</i>	n=5, c=0, m=100	

6) Test Methods

(1) Water

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Nutrients

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.2 Micronutrient Test Methods.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(6) *Cronobacter* spp.

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp.”

(7) *Bacillus cereus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(8) Carbide

Test in accordance with “Chapter 8. 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.”

~~10-5 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 shall 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, B₁, B₂, B₆, 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, B₁, B₂, B₆, 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 B₁, B₂, B₆, 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, B₁, B₂, B₆, 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; baby 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 milk formulas, infant formulas; follow-up formulas; baby foods for infants/young children; foods for patients with congenital metabolic disorders; and formulas for infants/young children with cow's milk protein allergy.

Type Item	Foods for patients	Foods for patients with congenital metabolic disorders
(1) Water (%)	Not more than 10.0% (only applicable to powder products)	
(2) Calorie	=	=
(3) Crude protein	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)	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. (however, where necessary to limit the amount due to characteristics of the disease, not more 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	Not less than the indicated amount (however, where necessary to limit

	and zinc)	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	
(11) <i>Bacillus cereus</i>	n=5, c=0, m=100	

5) Specifications

Type Item	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 amount; however, for selenium, not more than 9 µg/100 kcal, for chromium and molybdenum, not more than 10 µg/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 for by ADPI in the U.S.); (however, only applicable to powder products)	
(10) <i>Cronobacter</i> spp.	n=5, c=0, m=0/60g (only applicable to powder products for infants under 6 months of age)	
(11) <i>Bacillus cereus</i>	n=5, c=0, m=100	

~~6) Test Methods~~

~~(1) Water~~

~~Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”~~

~~(2) Nutrients~~

~~Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.2 Micronutrient Test Methods.”~~

~~(3) Coliforms~~

~~Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”~~

~~(4) Bacterial count~~

~~Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”~~

~~(5) Tar colors~~

~~Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”~~

~~(6) *Cronobacter* spp.~~

~~Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.21 *Cronobacter* spp.”~~

~~(7) *Bacillus cereus*~~

~~Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”~~

~~(8) Carbide~~

~~Test in accordance with “Chapter 8. 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.”~~

10-6 Weight Control Formulas

<MFDS Notice 2020-114, Nov. 26, 2020> (Enforcement date : Jan. 1, 2022)

10-5. 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, B₁, B₂, B₆, 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), B₁ (mg), B₂ (mg), B₆ (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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Crude protein

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(3) Vitamins

Test in accordance with “Chapter 8. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2 Vitamins.”

(4) Minerals

Test in accordance with “Chapter 8. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Minerals.”

(5) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) *Bacillus cereus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

10-7 Foods for Pregnant/Lactating Women

<MFDS Notice 2020-114, Nov. 26, 2020> (Enforcement date : Jan. 1, 2022)

10-6. 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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Nutrients

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.2 Micronutrient Test Methods.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

11. Foods for Special Medical Purposes

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 or limited nutritional ingredients or those who need to supplement some nutrients physiologically different from ordinary people due to diseases, operations or clinical conditions in order to replace a full or partial meal

11-1 Standard Nutritional Formulas

1) Definition

Standard Nutritional Formulas refers to foods prepared and processed in accordance with the standards for ingredients of standard nutritional formulas prescribed in this notice, in the form of liquid, gel, or powder or granules that can be consumed in combination with water or food in order that it is allowed to supply nutrition in a balanced manner by substituting or supplementing meals for the general public and those who have special nutritional requirements or need physical maintenance and recovery due to the clinical conditions of diseases, surgery, etc.

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 and shall be capable of

meeting the nutritional needs of each disease

(4) In case that a person with a disease (especially a person with complications) intends to consume the product for the purpose of meal management, it shall be specified in the product to eat it after consulting with a specialist, such as a doctor or a clinical nutritionist.

(5) Balanced nutritional formulas for patients shall be formulated with ingredients or added with nutrients containing 50% or more daily value of vitamin A, B₁, B₂, B₆, C, D, E, niacin, folic acid, protein, calcium and iron per 1000 kcal of the product to replace a full or partial meal. However, in the case of nutrients with an upper limit of daily intake, the upper limit of the corresponding nutrient shall not exceed 50% per 1,000 kcal of the product.

Nutrients	Standard	Upper limits	Nutrients	Standard	Upper limits
Vitamin A (ug RAE)	700	3,000	Niacin (mg NE)	15	35
Vitamin B1 (mg)	1.2	-	Folic Acid (ug)	400	1,000
Vitamin B2 (mg)	1.4	-	Protein (g)	55	-
Vitamin B6 (mg)	1.5	100	Calcium (mg)	700	2,500
Vitamin C (mg)	100	2,000	Iron (mg)	12	45
Vitamin D (ug)	10	100	Zinc (mg)	8.5	35
Vitamin E (mg-TE)	11	540			

(6) Nutritional formulas for each disease shall be in accordance with the following standards: according to the nutritional needs of each disease, the standards for nutritional content other than the nutritional ingredients presented below shall follow (5) the standards of balanced nutritional formulas for patients.

① Calories from saturated fat in nutritional formulas for diabetics 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.

② Vitamin A and D of nutritional formulas for kidney patients shall be at least 20% of the standard value of nutrients per 1,000 kcal of the product. 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.

③ Hydrolyzed protein nutritional formulas for intestinal patients should contain 30% or more daily value of protein per 1000 kcal of the product, supplied as hydrolysates or free amino acids.

(7) If products falling the above (5) to (6) are intended for a particular population, such as a specific gender or age group, it may be based on the Dietary Reference Intakes for Koreans (KDRIs). In this case, the population should be specified.

(8) Food for the supply of calories and nutrients shall be prepared in such a way that it contains not less than 3 kcal per mL(g) calories of the product.

(9) A viscosity-improving food for dysphagia patients that is added to liquid food to increase viscosity shall not contain more than 5 mm of insoluble food when observed after measuring the viscosity control food with a viscosity of 400 mpa/s, putting it in at once and stirring it for an additional 10 seconds in 200 ml of distilled water of 20 ($\pm 2^{\circ}\text{C}$) during stirring (3 times/sec).

4) Food Type

(1) Balanced nutritional formulas for patients

It refers to manufactured and processed by means of combination of nutrients to prevent the deterioration of the patient's physical strength or to provide sufficient balanced nutrition to quickly recover the reduced physical strength due to illness, surgery, etc., excluding food falling under the type (2)~(5).

(2) Nutritional formulas for diabetics

It refers to the manufactured and processed patients by adjusting components that require intake management, such as sugar and saturated fat for patients who need blood glucose management, such as diabetics or high blood glucose level

(3) Nutrition formulas for kidney patients

It refers to manufactured and processed by adjusting the nutritional content to meet the nutritional needs of patients with kidney disease who need to control their intake of protein and electrolyte due to kidney disease.

(4) Hydrolyzed protein nutritional formulas for patients with intestinal diseases

It refers to the manufactured and processed by using protein hydrolyzed or hydrolyzed protein and combining necessary nutrients for patients whose digestive and absorption functions have been reduced due to intestinal diseases.

(5) Foods for supplying calorie and nutrition

It refers to manufactured and processed for consumption alone or mixed with other foods for patients who need to provide additional calories and nutrients due to hypertrophy or malnutrition caused by a disease.

(6) Viscosity-improving foods for dysphagia patients

It refers to a product used to reduce the risk of airway aspiration in dysdipsia patients who have difficulty eating food, which is added to food to increase viscosity.

5) Specifications

Item	Specifications
(1) Moisture (%)	Not more than 10.0%(Powder products only)
(2) Calorie	Not less than the indicated amount or within the indication
(3) Crude protein	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(however, where necessary to limit the amount due to characteristics of the disease, not more than the indicated amount)
(5) Vitamin	Not less than the indicated amount(only applicable to Vitamins A, B1, B2, B6, C, D, E, niacin, folic acid)
(6) Minerals	① Calcium, Iron, Zinc: Not less than the indicated amount

	② Sodium: Not more than indicated amount ③ potassium, phosphorus (product only for kidney patients): Not more than indicated amount or within the indication
(7) Fluoride	Not more than 0.2 mg/100 kcal (Only applicable to those with food additive containing fluorine)
(8) Tar color	Not detected
(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) Coliforms	n=5, c=0, m=0
(11) <i>Bacillus cereus</i>	n=5, c=0, m=100

6) Test methods

Test in accordance with “Chapter 8. General Test Methods

11-2. Customized Nutritional Formulas

1) Definition

Customized nutritional formulas refers to products that are manufactured and processed based on scientific evidence by manufacturer, in the form of liquid/gel, or powder and granulated food that can be consumed in combination with water or food to provide nutritional balance by substituting or supplementing meals for the general public and those who have different nutritional requirements or need physical fitness or rehabilitation due to temporary or chronic clinical conditions such as congenital, acquired diseases, surgery, etc.

2) Requirements for Ingredients, etc.

- (1) Special formulas for infants and young children who are hypersensitive to or allergic to milk protein shall be made from hydrolyzed milk proteins, amino acids, plant proteins, or milk protein hydrolyzed crude oil, milk powder, and milk powder as protein ingredients. And no food containing non-hydrolyzed milk protein shall be used as a raw material.

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 and shall be capable of meeting the nutritional needs of each disease
- (4) In case that a person with a disease (especially a person with complications) intends to consume the product for the purpose of meal management, it shall be specified in the product to eat it after consulting with a specialist, such as a doctor or a clinical nutritionist.
- (5) Selenium, chromium and molybdenum may be added as nutrients by considering consumers according to the type of food.
- (6) If products falling the above products are intended for a particular population, such as a specific gender or age group, it may be based on the Dietary Reference Intakes for Koreans (KDRIs). In this case, the population should be specified.
- (7) In case that a person with a disease (especially a person with complications) intends to consume the product for the purpose of meal management, it shall be specified in the product to eat it after consulting with a specialist, such as a doctor or a clinical nutritionist.

4) Food type

(1) Formulas for congenital metabolic diseases

It refers to the manufactured and processed by removing or restricting the metabolism of the body or adding other necessary ingredients for patients who accumulate 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.

(2) Special formulas for infants and young children

It refers to the manufactured and processed nutrients necessary for the growth

and development of infants and young children to replace breast milk or formula milk for infants or young children with very different physiological nutritional requirements, such as premature babies, who are hypersensitive to milk protein or have allergic symptoms to it. However this shall not apply to those classified as milk formulas, infant formulas, follow-up formulas, baby foods for infant/young children.

(3) Nutritional formulas for other patients

It refers to products not falling under other types of food 11-1~11-2 as the manufactured and processed nutritional ingredients to provide the necessary nutrients to patients in a balanced manner considering the characteristics of each patient's disease,

5) Specifications

Item	Specifications
(1) Moisture (%)	Not more than 10.0%(Powder products only)
(2) Calorie	Not less than the indicated amount or within the indication
(3) Crude protein	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(however, where necessary to limit the amount due to characteristics of the disease, not more than the indicated amount)
(5) Vitamin	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 among; however, for selenium, not more than 9 µg/100 kcal, for chromium and molybdenum, not more than 10 µg/100 kcal
(7) 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)
(8) Fluoride	Not more than 0.2 mg/100kcal. (only applicable to those with food additives containing fluorine)
(9) Tar color	Not detected
(10) Bacterial count	n=5, c=1, m=10, M=100(n=5, c=2, m=1,000, M=10,000 for powder products)
(11) Coliforms	n=5, c=0, m=0
(12) <i>Bacillus cereus</i>	n=5, c=0, m=100
(13) Cronobacter	n=5, c=0, m=0/60g (only applicable to powder products for infants under 6 months of age)

6) Test methods

Test in accordance with “Chapter 8. General Test Methods

11-3 Meal type dietary management foods for patients

1) Definition

Meal type dietary management foods for patients refers to a cooked food, a combination of cooked foods in the form of a lunch box or a diet, a combination of food ingredients prepared for consumers to cook and consume with a accompanied recipe, or a combination of cooked food and prepared ingredients so that chronic patients who need nutrition management can manage their meals conveniently for the nutritional needs of each disease

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 and shall be capable of

meeting the nutritional needs of each disease

- (4) In case that a person with a disease (especially a person with complications) intends to consume the product for the purpose of meal management, it shall be specified in the product to eat it after consulting with a specialist, such as a doctor or a clinical nutritionist.
- (5) It shall be manufactured by considering the target, the condition of the disease appropriate for intake, the amount of nutrients for one meal or the total daily intake, and the amount of ingredients necessary for diet management by disease and cooking methods.
- (6) Where the package is divided into meals or a table of diet, such as the amount of food consumed per meal, etc. is included, It can be manufactured from products that consume more than one meal. At this time, the sum of the amount of calories and nutrients for each meal shall be the same as the total amount of calories and the total amount of nutrients provided by the product.
- (7) The calorific value of a meal (the average calorific value of the product per meal in the case of serving at least two meals a day) shall be between 500 and 800 kcal. However, the calorific value may be different considering the characteristics of the intake, such as gender, age, weight, obesity, etc.
- (8) In principle, the balance of grains, fish, meat, and vegetables shall be made, and carbohydrates shall be supplied from whole grains, vegetables, fruits, etc. and foods with high dietary fiber shall be used first and materials are selected considering the characteristics of each disease. Foods high in cholesterol, saturated fat, and trans fat should not be used as much as possible.
- (9) Meal type dietary management foods for patients shall be prepared in compliance with the following nutritional requirements for each disease and shall be based on the amount of one meal. And products configured for consumers to prepare rice separately and eat it together shall be manufactured to meet the following nutritional standards, including rice.
 - ① Calories from saturated fat of food for diabetics should account for less than 10% of total calories. and the 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. Protein, carbohydrates, fat, etc. shall be prepared in a balanced manner, and protein shall be not less than 18 g and sodium shall not exceed 1,350 mg.

- ② Potassium and phosphorus of foods for kidney 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. Sodium shall not exceed 650 mg.

(10) Among Meal type dietary management foods for patients, the meal kit type shall comply with the following standards

(1) Meal kit products shall comply with the following standards:

- ① Ingredients such as sauces, vegetables, etc. consumed in a non-heated state shall be sterilized or pasteurized. At this time, if it is difficult to sterilize by heat, such as for vegetables, they can be used after sterilization using disinfectants allowed as food additives.
- ② Edible eggs, poultry and Agricultural, livestock, and fishery products such as meat, fish, shellfish, and vegetables, which are consumed without heating which are consumed without edible eggs, poultry, and heated dishes, shall be classified and packaged separately so that they do not come into direct contact with other materials. In addition, in the case of other materials, non-heated and post-heating materials should be packaged separately so that they do not mix.
- ③ Where edible eggs are included, they shall be water-washed in accordance with paragraph 2.4.13.
- ④ In case of using packaged food which other manufacturers have done as a constituent material as it is packaged, ones that conform to the standards and specifications of such food shall be used.
- ⑤ In the case of products that are intended to be used as cooking ingredients, such as edible fats and seasonings held at home, specific information on available ingredients shall be provided so that cooked food

meets the nutritional needs of each disease, and metering tools, etc. shall be provided so that accurate quantities can be measured and used.

- (11) Meal type dietary management foods for patients shall be marked with symbols indicating the contents of the product, place of manufacture, and date of manufacture, and shall be kept for three years to check the symbols of the details of work.

4) Food type

(1) Dietary foods for diabetes patients

It refers to a product manufactured and processed to replace the entire meal by selecting the appropriate ingredients and organizing them to balance major nutrients such as carbohydrates, fats, and proteins while managing the intake of sugars and saturated fats in accordance with the nutritional needs of people who need to manage their sugar intake.

(2) Dietary food for patients with kidney disease

It refers to a product manufactured and processed so that proper ingredients such as potassium, phosphorus, sodium, and protein can be consumed by selecting and configuring to meet the nutritional needs of patients who need to control their intake of protein and electrolyte due to kidney disease.

5) Specification

Item \ Type	Meal type dietary management foods for patients ^{*1}	
	Ready-to-eat type (Non-heated food)	Meak kit type(including Ready-to-cook) ^{*2} (Heated and cooked food)
(1) Calorie	Not more than 10.0%(Powder products only)	
(2) Crude protein	Not less than the indicated amount or within the indication	
(3) Crude fat	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) Vitamin	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) Minerals	Not less than the indicated amount(however, not more than	

	indicated amount for sodium, and Not less than the indicated amount or within the indication for potassium, phosphorus only for the product of kidney patients	
(6) Fluoride	Not more than 0.2 mg/100kcal. (only applicable to those with food additives containing fluorine)	
(7) Tar color	Not detected	
(8) Bacterial count	n=5, c=0, m=0 (for sterilized products)	
(9) Coliforms	n=5, c=1, m=0, M=10 (for pasteurized products)	
(10) <i>Escherichia coli</i>	n=5, c=1, m=0, M=10 (except for sterilized products)	
(11) <i>Staphylococcus aureus</i>	Not more than 100/1 g	
(12) Salmonella.	n=5, c=0, m=0/25g	
(13) <i>Vibrio parahaemolyticus</i>	Not more than 100/1 g (applicable only to products containing non-pasteurized or non-sterilized seafood)	
(14) Enterohemorrhagic <i>Escherichia coli</i>	n=5, c=0, m=0/25g	
(15) <i>Bacillus cereus</i>	Not more than 100/1 g	-
(16) <i>Clostridium perfringens</i>	Not more than 100/1 g	-

* Note 1. Products that are composed of cooked food and trimmed food ingredients are applied to the standard of meal kit products.

* Note 2. Among ingredients that are cooked and consumed by heat, excluding agricultural, livestock, and fishery materials which are packaged separately to prevent cross contamination with other ingredients, all the other ingredients are combined to apply the specifications.

6) Test methods

Test in accordance with "Chapter 8. General Test Methods

12. 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, <i>chunjang</i> , <i>chunggukjang</i> (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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

13. 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.

13-1 Vinegars

1) Definition

Vinegar refers to fermented vinegar or glacial acetic acid that is produced through the acetic acid fermentation of grains, fruits, alcoholic beverages, etc. as the main ingredient, or manufactured through the processes of mixing grain saccharification solution, fruit juice, etc., therewith and ripening; or to diluted acetic acid manufactured by diluting the main ingredient of acetic acid with potable 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) Fermented vinegar

It refers to a solution produced through the acetic acid fermentation of fruits/grain mash, fruit wine, fruit juice, grain wine, grain saccharification solution, spirits or saccharides, etc., as ingredients; or manufactured through the processes of mixing grain saccharification solution, fruit juice, etc., therewith and ripening. Among them, a solution produced through the acetic acid fermentation of persimmons is called persimmon vinegar.

(2) Diluted acetic acid

It refers to a solution produced by diluting the main ingredient of glacial acetic acid or acetic acid with potable water.

5) Specifications

(1) Total acid [as acetic acid, w/v%(w/w% for solid food)] : 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)
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6) Test Methods

(1) Total acid

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.1.1 Total Acid.”

(2) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(3) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

13-2 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) 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. to have moisture content of not more than 8%; and used to give a unique taste and flavor to food.

(2) Mayonnaise

It refers to a product manufactured through emulsification, etc. using edible oils, egg yolk or whole egg, vinegar or fruit juice as the main ingredients, to which other food or food additives are added.

(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) 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.

5) Specifications

- (1) Coliforms : n=5, c=1, m=0, M=10 (only applicable to pasteurized products)
- (2) *Escherichia coli* : n=5, c=1, m=0, M=10 (only applicable to non-pasteurized products; n=5, c=2, m=0, M=10 for Composite seasoning)
- (3) Bacterial count : n=5, c=0, m=0 (only applicable to sterilized products)
- (4) Tar colors other than those permitted : Shall not be detected
- (5) 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 Sauce)
Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (only applicable to sauce; if used with Methyl ρ -Hydroxybenzoate or Ethyl ρ -Hydroxybenzoate, the sum of usage as sorbic acid and ρ -Hydroxybenzoic acid shall be not more than 1.0, and the usage as ρ -Hydroxybenzoic acid shall be not more than 0.2)
	Not more than 0.5 (as sorbic acid; only applicable to Tomato ketchup)
Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 1.0 (as benzoic acid; only applicable to mayonnaise)

6) Test Methods

(1) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(2) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia Coli*.”

(3) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(4) Not allowed tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

”

(5) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

13-3 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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(2) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

13-4 Hot Pepper Powder or Shredded Hot Pepper

1) Definition

Hot pepper powder or Shredded hot pepper refers to products that are obtained by grinding 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 grinding 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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Ash

Precisely measure 2~4 g of sample and test it in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash.”

(3) Acid-insoluble ash

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.2.1 Acid-insoluble Ash.”

(4) Adulterants

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.2.2 Adulterants.”

(5) Mold count

Test in accordance with “Chapter 8. General Test Methods, 1.7 Mold Count.”

(6) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(7) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

13-5 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, curries and hot pepper powder or shredded hot pepper 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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.3.1 Adulterants.”

(2) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(5) Mold count

Test in accordance with “Chapter 8. General Test Methods, 1.7 Mold Count.”

13-6 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

It refers to edible salt in powder or crystal form produced by processing crystals that mainly contain sodium chloride obtained from natural products other than seawater, such as rock salt and lake salt, to be suitable for human consumption, or mixing different types of salt with each other, or using methods other than those specified in the food types (1) solar salt through (4) refined salt above, without adding other food or food additives (excluding anti-caking agents).

(6) Processed salt

It refers to salt produced by 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

Type Item	Solar salt	Reworked salt	Burnt/Molte n 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 70.0 (Not less than 88.0 for rock and lake salt)	Not less than 35.0
(2) 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
(3) 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	-
(4) Arsenic (mg/kg)	Not more than 0.5					
(5) Lead (mg/kg)	Not more than 2.0					

(6) Cadmium (mg/kg)	Not more than 0.5	
(7) Mercury (mg/kg)	Not more than 0.1	
(8) 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 in accordance with “Chapter 8. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1.5 Edible Salt.”

(3) Water

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(4) Insolubles

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.4.2 Insolubles.”

(5) Arsenic

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(6) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(7) Cadmium

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(8) Mercury

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy

Metals, 9.1.6 Mercury (Hg).”

(9) Ferrocyanide ion

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.6.4.5 Ferrocyanide ion.”

14. 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 *Kimchi* products, Pickled food products and Boiled foods.

14-1 *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 in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals.”

(2) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(3) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(4) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

14-2 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; only applicable to pickled food)
	Not more than 0.5 [as sorbic acid; only applicable to sugar-preserved foods (excluding sugar-preserved dried products)]
Benzoic acid; Sodium benzoate; Potassium benzoate; Calcium benzoate	Not more than 1.0 (as benzoic acid; only applicable to pickled food. 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; and the usage as sorbic acid shall not be more than 1.0)

6) Test Methods

(1) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(2) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia Coli*.”

(4) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(5) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

14-3 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 foods made with agricultural products as main ingredient)
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6) Test Methods

(1) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(2) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(4) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

15. Alcoholic Beverages

Alcoholic beverages refers to alcoholic liquors manufactured/processed by fermenting and distilling starch ingredients such as grains, etc. or glycoprotein ingredients such as fruits, etc. used as main ingredients, as set forth by the Liquor Tax Act, such as fermented alcoholic beverages, distilled alcoholic beverages, other alcoholic beverages and spirits.

15-1 Fermented Alcoholic Beverages

1) Definition

Fermented Alcoholic Beverages refer to Takju(Korean turbid rice wine), Yakju(Korean clear rice wine), Cheongju(Korean refined rice wine), beer, and fruit wine prepared by fermenting them with starchy materials, such as grains, or glycoprotein ingredients such as fruits, as the main ingredients.

2) Requirements for Ingredients, etc

3) Manufacturing/Processing standards

The types, usage, and manufacturing methods of added materials that can be added to the fermentation and manufacturing process of fermented alcoholic beverages shall be governed by the Liquor Tax Act.

4) Food type

(1) Takju(Korean turbid rice wine)

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 as the main ingredient with/without the addition of carbon dioxide, etc. during a fermented/conditioning process.

(2) Yakju(Korean clear rice wine)

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.

(3) Cheongju(Korean refined rice wine)

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.

(4) Beer

Beer refers to a product manufactured by conditioning mash fermented or filtered from germinated barelys, hop, starch ingredients and water, etc., with/without the addition of ingredients with starch, sugars, caramel, carbon dioxide and spirits, etc. during a fermentation/conditioning process.

(5) Fruit wine

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.

5) Specifications

- (1) Ethanol (v/v%) : Conform to the provisions of the Liquor Tax Act.
- (2) Methanol (mg/mL) : Not more than 0.5 (In case of fruit wine, 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)
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- (4) Lead (mg/kg) : Not more than 0.2 (only applicable to grape wine)
- (5) Coliforms : n=5, c=2, m=0, M=10 (among Takju and yakju, only applicable to pasteurized products)
- (6) *Escherichia coli* : n=5, c=2, m=0, M=10 (among Takju and yakju, except pasteurized products)

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.1 Methanol.”

(3) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(4) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1.2 Lead(Pb).”

(5) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

15-2 Distilled Alcoholic Beverages

1) Definition

Distilled alcoholic beverages refer to products made by fermenting whole-material raw materials such as grains, etc. or sugar-based raw materials such as fruits, etc. as the main raw materials, distilling them, or storing them in a wooden container.

2) Requirements for Ingredients

3) Manufacturing/Processing standards

The types, usage, and manufacturing methods of added materials that can be added to the fermentation and manufacturing process of distilled alcoholic beverages shall be governed by the Liquor Tax Act.

4) Food type

(1) Soju

Soju 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. except for those processed by germinated grains as whole or part of materials, sealed or fermented grains sprinkled with water or filtered with birch charcoal.

(2) Whiskey

Whisky refers to a product made by germinated grains and water or distilling wash fermented from germinated grains, with/without the addition of grains using water, etc. as an ingredient; and storing it in a cask more than 1 year.

(3) Brandy

Brandy refers to a product made by distilling fruit wine (including fruit wine draff) and storing it in a cask more than 1 year or adding spirits and additional material

(4) General distilled alcoholic beverages

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. except for soju, whiskey, or brandy.

(5) Liqueur

Liqueur refers to products belonging to distilled alcoholic beverages having at least 2 degrees of non-volatile water.

5) Specifications

- (1) Ethanol (v/v%) : Conform to the provisions of the Liquor Tax Act.
- (2) Methanol (mg/mL) : Not more than 1.0 (However, among general distilled alcoholic beverages, products mainly composed of grains, soju, and whiskey shall not exceed 0.5.)
- (3) Aldehyde(mg/100mL) : Not more than 70.0 (except for liqueur)

6) Test Methods

(1) Ethanol

Conform to the provisions of the Liquor Tax Act.

(2) Methanol

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.1 Methanol.”

(3) Aldehyde

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.2.1 Aldehyde.”

15-3 Other Alcoholic Beverages

1) Definition

Other alcoholic beverages refers to liquors other than those included in 15-1 Fermented alcoholic beverages, 15-2 Distilled alcoholic beverages or 15-4 Spirits.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

The types, usage, and manufacturing methods of added materials that can be added to the fermentation and manufacturing process of other alcoholic beverages shall be governed by the Liquor Tax Act

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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.1.1 Methanol.”

15-4 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

The types, usage, and manufacturing methods of added materials that can be added to the fermentation and manufacturing process of spirits shall be governed by the Liquor Tax Act

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) Copper (mg/kg)	-	Not more than 3
(9) Permanganate reducing agent	Shall not be discolored more than the standard solution within 5 minutes	-
(10) Sulfuric acid color	Not detected	-

reaction		
(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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.1 Ethanol.”

(3) Residue on evaporation

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.4 Aldehyde, Methanol and Fusel Oil.”

(6) Copper

Test in accordance with “Chapter 8. General Test Methods, 9.1.9 Copper (Cu)

(7) Permanganate reducing agent

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.7.3.7 Chloride.”

16. 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.

16-1 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 in accordance with “Chapter 8. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign matters

Test in accordance with “Chapter 8. General Test Methods, 1.2 Foreign Matters.”

(3) Water

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(4) Ash

Precisely measure 3~5 g of sample and test it in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash.”

(5) Acidity

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.8.1.1 Acidity.”

(6) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(8) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

16-2 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

Item \ Type	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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) Ash

Precisely measure 3~5 g of sample and test it in accordance with “Chapter 7. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash (based on 14% moisture).”

(3) Sieving

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.8.2.1 Sieving.”

(4) Lead

Test in accordance with “Chapter 8. General Test Methods, 9.1.2 Lead (Pb).”

(5) Cadmium

Test in accordance with “Chapter 8. General Test Methods, 9.1.3 Cadmium (Cd).”

16-3 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 ($\mu\text{g}/\text{kg}$) : 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 $\mu\text{g}/\text{kg}$.)

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

6) Test Methods

(1) Aflatoxin

Test in accordance with “Chapter 8. General Test Methods, 9.2 Mycotoxins.”

(2) *Salmonella* spp.

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

16-4 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, B₁, B₂, B₆, 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 in accordance with “Chapter 8. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.2 Vitamins.”

(2) Minerals

Test in accordance with “Chapter 8. General Test Methods, 2.2 Micronutrient Test Methods, 2.2.1 Minerals.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

16-5 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 ($\mu\text{g}/\text{kg}$) : Not more than 15.0 (as the sum of B₁, B₂, G₁ and G₂; however, B₁ shall not be more than 10.0 $\mu\text{g}/\text{kg}$.)

(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 in accordance with “Chapter 8. General Test Methods, 9.2 Mycotoxins.”

(2) Sulfur dioxide

Test in accordance with “Chapter 8. General Test Methods, 3.5 Sulfurous Acid, Sodium Hydrosulfite and Its Salts.”

(3) Lead and Cadmium

Test in accordance with “Chapter 8. General Test Methods, 9.1 Heavy Metals, 9.1.2 Lead (Pb) and 9.1.3 Cadmium (Cd) Test Methods.”

16-6 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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) Crude protein

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.8.3.1 α - Amylase.”

(4) Protease

Test in accordance with “Chapter 8. General Test Methods, 6. Test Methods

for Verification of Specifications for Each Food Product, 6.8.3.2 Protease.”

(5) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia Coli*.”

16-7 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 : Shall be acceptable
- (2) Foreign Matters : Shall be 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 processed fruit/vegetable products and non-pasteurized products for direct consumption without further processing or heating)
- (9) Total aflatoxin ($\mu\text{g}/\text{kg}$) : Not more than 15.0 (as the sum of B₁, B₂, G₁ and G₂; however, B₁ shall not be more than 10.0 $\mu\text{g}/\text{kg}$. It is only applicable to maize products for popcorn among processed grain products)

6) Test Methods

(1) Properties and Conditions

Test in accordance with “Chapter 8. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign Matters

Test in accordance with “Chapter 8. General Test Methods, 1.2 Foreign Matters.”

(3) Acid value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.1 Acid Value.”

(4) Peroxide value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.5 Peroxide Value.”

(5) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(6) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(7) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(8) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(9) Aflatoxin

Test in accordance with “Chapter 8. General Test Methods, 9.2 Mycotoxins.”

17. 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.

17-1 Hams (*Livestock products)

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) : Less 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)
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(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 in accordance with “Chapter 8. General Test Methods.”

17-2 Sausages (*Livestock products)

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 for the stuffing of the products refrigerated or frozen after filling 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) : Less 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)
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- (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 in accordance with “Chapter 8. General Test Methods.”

17-3 Bacons (*Livestock products)

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) : Less 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)
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(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 in accordance with “Chapter 8. General Test Methods.”

17-4 Dry Stored Meats (*Livestock products)

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) : Less 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)
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(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 in accordance with “Chapter 8. General Test Methods.”

17-5 Seasoned Meats (*Livestock products)

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 *suyuk* (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; or 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) : Less 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 in accordance with “Chapter 8. General Test Methods.”

17-6 Meat Extract Product (*Livestock products)

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 in accordance with “Chapter 8. General Test Methods.”

17-7 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 17-1~17-6.

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)
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6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.”

17-8 Packaged Meat (*Livestock products)

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 : Shall have its unique color and gloss and shall be 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 in accordance with “Chapter 8. General Test Methods.”

18. Egg Products

18-1 Egg Product (*Livestock products)

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) Hairline-cracked eggs/dirty eggs/soft-shelled eggs shall be processed within 24 hours of receiving them (except that, they shall be processed within 72 hours if stored at 10°C or below). In case of storing normal eggs for 3 or days, they shall be stored at 10°C or below.
- (2) 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.
- (3) In case of using eggs which are not washed with water, they shall be washed with clean water (containing 100~200 ppm sodium hypochlorite or other means with equivalent or better pasteurizing effect) at 30°C or above and 5°C above the eggs' temperature.
- (4) After cracking, the unpasteurized egg contents shall be cooled to 5°C or below, and they shall not be stored for more than 72 hours.
- (5) Pasteurized eggs shall be filtered, homogenized and pasteurized.
- (6) 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.

- (7) Egg white powder shall be obtained by drying egg whites after removing saccharide components therefrom in order to prevent discoloration/denaturation of products.
- (8) 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.
- (9) Pasteurized products shall be quickly cooled down to 5°C or below after pasteurization process in order to minimize microbial growth.
- (10) Eggs for manufacturing and processing of egg products shall be stored in cool place (0~15°C), away from direct sunlight. When refrigerated, they shall be stored in separate areas from egg products.
- (11) Eggs containing blood spots and meat spots shall be used after removing such spots using a proper method.
- (12) Egg contents for manufacturing and processing of egg products shall not be obtained in a unsanitary manner, such as compression or centrifugation.

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 (applicable only 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* : $n=5$, $c=0$, $m=0/25$ g (only applicable to pasteurized products or products for direct consumption)

6) Test Methods

Test in accordance with “Chapter 8 General Test Methods.”

18-2 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 : $n=5$, $c=1$, $m=10$, $M=100$ (applicable only to pasteurized products)

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

$n=5$, $c=1$, $m=10,000$, $M=50,000$ (applicable only to pasteurized products)

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

6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.”

19. 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.

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19. 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, Hydrolyzed milk protein products and processed milk containing product; except for those intended for drinking and containing not less than 0.5% coffee solids.

19-1 Milks (*Livestock products)

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 in accordance with “Chapter 8. General Test Methods.”

19-2 Processed Milks (*Livestock products)

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 in accordance with “Chapter 8. General Test Methods.”

19-3 Goat Milk (*Livestock products)

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 in accordance with “Chapter 8. General Test Methods.”

19-4 Fermented Milks (*Livestock products)

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 per 1 mL	Not less than 100,000,000 per 1 mL (however, for frozen products, not less than 10,000,000)	Not less than 10,000,000 per 1 mL	Not less than 100,000,000 per 1 mL (however, for frozen products, not less than 10,000,000)	Not less than 10,000,000 per 1 mL	-
(6) Coliforms	n=5, c=2, m=0, M=10					
(7) <i>Salmonella</i> spp.	n=5, c=0, m=0/25 g					
(8) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25 g					
(9) <i>Staphylococcus aureus</i>	n=5, c=0, m=0/25 g					

6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.”

19-5 Butter Milk (*Livestock products)

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=0, 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 in accordance with “Chapter 8. General Test Methods.”

19-6 Concentrated Milks (*Livestock products)

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 (applicable only to concentrated milk)	Not less than 8.0	-	-
(4) Acidity (%)	Not more than 0.4 (based on lactic acid; applicable only 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°C or for 2 weeks at 30°C.)	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=0, M=10 (Sterilized products are excluded)	n=5, c=2, m=0, M=10	n=5, c=2, m=0, M=10	n=5, c=2, m=0, M=10
(8) <i>Salmonella</i> spp.	n=5, c=0, m=0/25g			
(9) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g			
(10) <i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g			

6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.”

19-7 Milk Creams (*Livestock products)

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 (not less 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°C or for 2 weeks at 30°C.)
(5) Coliforms	n=5, c=2, m=0, M=10	n=5, c=2, m=0, M=10 (sterilized products are excluded)
(6) <i>Salmonella</i> spp.	n=5, c=0, m=0/25 g	
(7) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25 g	
(8) <i>Staphylococcus aureus</i>	n=5, c=0, m=0/25 g	

6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.”

19-8 Butters (*Livestock products)

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=0, M=10		
(7) <i>Salmonella</i> spp.	n=5, c=0, m=0/25g		

(8) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g
(9) <i>Staphylococcus aureus</i>	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 in accordance with “Chapter 8. General Test Methods.”

19-9 Cheeses (*Livestock products)

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) <i>Escherichia coli</i>	n=5, c=1, m=10, M=100	-
(2) Coliforms	-	n=5, c=2, m=10, M=100
(3) <i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
(4) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
(5) <i>Staphylococcus aureus</i>	n=5, c=2, m=10, M=100	
(6) <i>Clostridium perfringens</i>	n=5, c=2, m=10, M=100 (applicable only to cheese made from unpasteurized raw milk)	
(7) Enterohemorrhagic <i>Escherichia coli</i>	n=5, c=0, m=0/25 g (applicable only 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 in accordance with “Chapter 8. General Test Methods.”

19-10 Powdered Milks (*Livestock products)

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

Type Item	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=0, M=10			
(7) <i>Salmonella</i> spp.	n=5, c=0, m=0/25 g			
(8) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25 g			

6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.”

19-11 Wheys (*Livestock products)

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°C or for 2 weeks at 30°C.)	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.)	n=5, c=2, m=10,000, M=50,000
(3) Coliforms	n=5, c=2, m=0, M=10 (sterilized products are excluded)		n=5, c=2, m=0, M=10

(4) <i>Salmonella</i> spp.	n=5, c=0, m=0/25g
(5) <i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g

6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.”

19-12 Lactose (*Livestock products)

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=0, 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 in accordance with “Chapter 8. General Test Methods.”

19-13 Hydrolyzed Milk Protein Products (*Livestock 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
(applicable only 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=0, 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 in accordance with “Chapter 8. General Test Methods.”

<MFDS Notice 2020-3, Jan. 14, 2020> (Enforcement date : Jan. 1, 2022)

19-14 Processed milk containing product

1) Definition

Processed milk containing product refers to a product manufactured and processed with raw milk or milk products as its main ingredient and other than those falling under food types 19-1 through 19-13.

2) Requirements for Ingredients, etc.

3) Manufacturing/Processing Standards

(1) Raw milk or milk products used in manufacturing dairy products shall be pasteurized or sterilized before, or shall be pasteurized or sterilized prior to the completion of the finished product

4) Food Type

5) Specifications

(1) Properties and Conditions: Acceptable

(2) Foreign matters: Be Acceptable

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

(4) *Escherichia coli* : n=5, c=1, m=0, and M=10 (Only applicable to non-pasteurized products for direct consumption)

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

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

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

(8) *Staphylococcus aureus* : n=5, c=0, m=0/25g

6) Test Methods

Test in accordance with “Chapter 8. General Test Methods.

20. 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.

20-1 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. Except that, Surimi and Semi-finished fish meat product may not be 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 (applicable only to fish sausages)

(2) Tar colors : Shall not be detected (except for fish sausages)

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

(4) Bacterial count : n=5, c=0, m=0 (applicable only 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)
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6) Test Methods

(1) Nitrite ion

Test in accordance with “Chapter 8. General Test Methods, 3.6 Color Fixatives.”

(2) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

20-2 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) shall 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 *jeotkal* (Salted-fermented-and-seasoned seafood)

It refers to *jeotkal* seasoned by adding hot pepper powder and seasonings, etc.

(3) Fish sauce

It refers to a liquid filtered or separated from *jeotkal*; 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 (applicable only 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: (applicable only to products containing not more than 8% salt content).

Sorbic acid; Potassium sorbate; Calcium sorbate	Not more than 1.0 (as sorbic acid)
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- (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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.3.1 Total Nitrogen and Crude Protein.”

(2) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(4) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(5) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

20-3 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)
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6) Test Methods

(1) Sulfur dioxide

Test in accordance with “Chapter 8. General Test Methods, 3.5 Sulfurous Acid, Sodium Hydrosulfite and Its Salts.”

(2) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(3) *Staphylococcus aureus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.12 *Staphylococcus aureus*, 4.12.2 Quantitative Test.”

(4) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

20-4 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 (applicable only to oil-treated laver)

(2) Peroxide value : Not more than 60.0 (applicable only to oil-treated laver)

(3) Tar colors : Shall not be detected.

6) Test Methods

(1) Acid value

Test in accordance with “Chapter 8. General Test Methods 2.1.5.3.1. Acid Value.”

(2) Peroxide value

Precisely measure 1~5 g of fat and oil extracted for “(1) Acid value” and test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.5.3.5 Peroxide Value.”

(3) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

20-5 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 (<i>Sil</i>); Short agar strips (<i>San</i>); Agar flakes (<i>Suhl</i>)	Agar powder; <i>In-sang</i> 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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.11.1.1 Water.”

(3) Crude protein

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.2 Ash.”

(5) Hot-water-insoluble residues

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 6. Test Methods for Verification of Specifications for Each Food Product, 6.11.1.3 Boric Acid.”

20-6 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 (applicable only to oil-fried/oil-treated foods)

(4) Peroxide value: Not more than 60 (applicable only to oil-fried/oil-treated foods)

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

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

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

6) Test Methods

(1) Properties and Conditions

Test in accordance with “Chapter 8. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign Matters

Test in accordance with “Chapter 8. General Test Methods, 1.2 Foreign Matters.”

(3) Acid value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.1 Acid Value.”

(4) Peroxide value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.5 Peroxide Value.”

(5) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(7) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

21. 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.

21-1 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 (applicable only to products containing other meats)

- (2) Volatile basic nitrogen (mg%) : Not more than 20 (applicable only to products with 100% other meats)
- (3) Tar colors : Shall not be detected (applicable only to products containing other meats).
- (4) Coliforms : n=5, c=2, m=10, M=100 (applicable only to pasteurized products)
- (5) Bacterial count : n=5, c=0, m=0 (applicable only to sterilized products)
- (6) *Salmonella* spp. : n=5, c=0, m=0/25 g (applicable only to pasteurized products)
- (7) Enterohemorrhagic *Escherichia coli* : n=5, c=0, m=0/25 g (applicable only 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; applicable only to products containing meat]
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6) Test Methods

(1) Nitrite ion

Test in accordance with “Chapter 8. General Test Methods, 3.6 Color Fixatives.”

(2) Volatile basic nitrogen

Test in accordance with “Chapter 8. General Test Methods, 6.9.4.1 Volatile Basic Nitrogen.”

(3) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(4) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(5) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(6) *Salmonella* spp.

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

(7) Enterohemorrhagic *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.16 Enterohemorrhagic *Escherichia coli*.”

(8) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

21-2 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 (applicable only to edible silkworm pupae products)

(2) Peroxide value : Not more than 60 (applicable only to edible silkworm pupae products)

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

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

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

6) Test Methods

(1) Acid value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.1 Acid Value.”

(2) Peroxide value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.5 Peroxide Value.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(5) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

21-3 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

Item \ Type	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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) Ash

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.2 Ash.”

(3) Crude protein

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

21-4 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 : $n=5$, $c=1$, $m=100$, $M=1,000$ (applicable only to liquid products for direct consumption)

(3) Coliforms : $n=5$, $c=1$, $m=0$, $M=10$ (applicable only 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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(2) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(3) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(4) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

22. 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.

22-1 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3.4 Color Additives.”

(8) Sodium saccharin

Test in accordance with “Chapter 8. General Test Methods, 3.2.1 Sodium saccharin.”

(9) Isomerized sugar

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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.”

22-2 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

Item \ Type	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) <i>Escherichia coli</i>	n=5, c=1, m=0, M=10	

6) Test Methods

(1) 10- hydroxy-2- decenoic acid (10-HDA)

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia Coli*.”

22-3 Processed Pollen Foods

1) Definition

Processed pollen 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

Item \ Type	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 deleted	
(4) <i>Escherichia coli</i>	n=5, c=1, m=0, M=10	

6) Test Methods

(1) Water

Test in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) Crude protein

Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 3. Test Methods for Food Additives in Food, 3.4 Color Additives.”

(4) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

23. 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.

23-1 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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1.1 Water.”

(2) *Clostridium perfringens*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.14 *Clostridium perfringens*, 4.14.2 Quantitative Test.”

(3) *Bacillus cereus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*, 4.18.2 Quantitative Test.”

(4) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

23-2 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 : $n=5$, $c=0$, $m=0$ (applicable only to sterilized products)

(2) Coliforms : $n=5$, $c=1$, $m=0$, $M=10$ (applicable only to pasteurized Ready-to-cook food)

(3) *Escherichia coli* : $n=5$, $c=1$, $m=0$, $M=10$ (applicable only to Ready-to-eat food)

and Ready-to-cook food; except for pasteurized and sterilized Ready-to-cook product); n=5, c=1, m=10, M=100 (applicable only 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 (applicable only to Ready-to-eat food and Fresh-cut product containing non-pasteurized or non-sterilized seafoods.)
- (7) *Bacillus cereus* : Not more than 1,000/1 g (applicable only to Ready-to-eat food and Fresh-cut product)
- (8) Enterohemorrhagic *Escherichia coli* : n=5, c=0, m=0/25 g (applicable only to Fresh-cut product)
- (9) *Clostridium perfringens* : Not more than 100/1 g (applicable only to Ready-to-eat foods and Fresh-cut product).

6) Test Methods

(1) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(2) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(4) *Staphylococcus aureus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.12 *Staphylococcus aureus*, 4.12.2 Quantitative Test.”

(5) *Salmonella* spp.

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological

Test Methods, 4.11 *Salmonella* spp.”

(6) *Vibrio parahaemolyticus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.13 *Vibrio Parahaemolyticus*.”

(7) *Bacillus cereus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*.”

(8) Enterohemorrhagic *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.16 Enterohemorrhagic *Escherichia coli*.”

(9) *Clostridium perfringens*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.14 *Clostridium perfringens*, 4.14.2 Quantitative Test.”

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23-2 Ready-to-Eat/Convenience Foods

1) Definition

Products in the Ready-to-eat/Convenience foods refers to Ready-to-eat food, Fresh-cut product, Ready-to-cook foods and Meal kit 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

(1) Meal kit products shall comply with the following standards:

- ① Vegetables or fruits that are provided for direct consumption without further heating, cleaning, or peeling shall be sterilized and washed.
- ② Edible eggs, poultry and Agricultural, livestock, and fishery products, which are consumed without heating shall be classified and packaged separately so that they do not come into direct contact with other

materials. In addition, in the case of other materials, materials for consumption for non-heated and after heating should be packaged separately so that they do not mix.

- ③ Where edible eggs are included, they shall be water-washed in accordance with paragraph 2.4.13.
- ④ In case of using packaged food which other manufacturers have done as a constituent material as it is packaged, ones that conform to the standards and specifications of such food shall be used.

4) Food Type

(1) 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.

(2) 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.

(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.

(4) Meal kit

It refers to products that consist of a certain amount of ingredients and spices, such as uncooked agricultural, livestock, fishery products and processed foods, and recipes needed for cooking so that consumers can easily cook and eat them at home according to the recipes provided.

5) Specifications

Item \ Type	Fresh-cut product	Ready-to-eat food	Ready-to-cook food	Meal kit* ¹
(1) Bacterial count	n=5, c=0, m=0 (applicable only to sterilized products)			-
(2) Coliforms	-	-	n=5, c=1, m=0, M=10 (applicable only to pasteurized products)	-
(3) <i>Escherichia coli</i>	n=5, c=1, m=10, M=100	n=5, c=1, m=0, M=10	n=5, c=1, m=0, M=10 (except for pasteurized and sterilized products)	n=5, c=1, m=0, M=10
(4) <i>Staphylococcus aureus</i>	Not more than 100/1 g			
(5) <i>Salmonella spp.</i>	n=5, c=0, m=0/25 g			
(6) <i>Vibrio parahaemolyticus</i>	Not more than 100/1 g (applicable only to product containing non-pasteurized or non-sterilized seafoods)		-	Not more than 100/1 g (applicable only to product containing non-pasteurized or non-sterilized seafoods)
(7) Enterohemorrhagic <i>Escherichia coli</i>	n=5, c=0, m=0 /25 g	-	-	n=5, c=0, m=0 /25 g (applicable only to agricultural, livestock and fishery products that are consumed without heat treatment)

(8) <i>Bacillus cereus</i>	Not more than 1000/1 g	-	-
(9) <i>Clostridium perfringens</i>	Not more than 100/1 g	-	-

* Note 1. Among ingredients that are cooked and consumed by heat, excluding agricultural, livestock, and fishery materials which are packaged separately to prevent cross contamination with other ingredients, all the other ingredients are combined to apply the specifications.

6) Test Methods

(1) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(2) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(3) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(4) *Staphylococcus aureus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.12 *Staphylococcus aureus*, 4.12.2 Quantitative Test.”

(5) *Salmonella* spp.

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp.”

(6) *Vibrio parahaemolyticus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.13 *Vibrio Parahaemolyticus*.”

(7) *Bacillus cereus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.18 *Bacillus cereus*.”

(8) Enterohemorrhagic *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.16 Enterohemorrhagic *Escherichia coli*.”

(9) *Clostridium perfringens*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.14 *Clostridium perfringens*, 4.14.2 Quantitative Test.”

Note 1. Among the ingredients that are cooked by way of heating, excluding the agricultural/livestock/seafood ingredients that are separately packed so that there is no intermixing with other ingredients, the remaining ingredients will have the specifications applied by mixing.

23-3 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 (applicable only to Dumpling).

(2) Tar colors : Shall not be detected (applicable only to Dumpling skin).

(3) Preservatives : Shall not be detected (applicable only to Dumpling skin).

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

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

6) Test Methods

(1) Sodium saccharin

Test in accordance with “Chapter 8. General Test Methods, 3.2 Artificial Sweeteners, 3.2.1 Sodium saccharin.”

(2) Tar colors

Test in accordance with “Chapter 8. General Test Methods, 3.4 Color

Additives.”

(3) Preservatives

Test in accordance with “Chapter 8. General Test Methods, 3.1 Preservatives.”

(4) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(5) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

24. Other Foods

24-1 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 in accordance with “Chapter 8. General Test Methods, 2. Food Component Test Methods, 2.1 General Component Test Methods, 2.1.1 Water.”

(2) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli* .”

24-2 Other Processed Products

1) Definition

It refers to products not falling under the category of “1. Confectioneries, Breads or Rice Cakes,” or “23. Ready-to-Eat/Convenience Foods” in “Chapter 5 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 (applicable only to oil-fried/oil treated foods)

(4) Peroxide value : Not more than 60 (oapplicable only to oil-fried/oil treated foods)

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

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

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

6) Test Methods

(1) Properties and Conditions

Test in accordance with “Chapter 8. General Test Methods, 1.1 Properties and Conditions.”

(2) Foreign matters

Test in accordance with “Chapter 8. General Test Methods, 1.2 Foreign Matters.”

(3) Acid value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.1 Acid Value.”

(4) Peroxide value

Test in accordance with “Chapter 8. General Test Methods, 2.1.5.3.5 Peroxide Value.”

(5) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7 Coliforms.”

(6) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

(7) *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

Chapter 6

**Standards and Specifications
for Cooked Foods, etc. from
Food Service Business**

Chapter 6. Standards and Specifications for Cooked Foods, etc., from Food Service Business (Including Meal Service Facilities)

1. Definition

“Cooked Foods from food service business(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. Application of standards and specifications

- 1) For the use of food additives, if the foods cooked and sold by the Food Service Business (including Meal Service Facilities) is the same or similar as processed foods according to food standards and specifications, “Standards and Specifications for Food Additives”(notified by Ministry of Food and Drug Safety) applied to such processed foods may be applied

3. 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 5. 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.

4. 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) Sterilizing agents and washing agents used in sterilizing and 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 sterilizing agents and washing agents shall be used for sterilizing and washing 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.
- (8) In case that animal ingredients such as meat and fish are cooked by heating, they shall be fully cooked to the center of the food. However, this may not be the case if the consumer requests it to be under-cooked.

5. 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(only food cooked directly, including simple cuts)
- (4) Bacterial count : Not more than 3,000/g (applicable only 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 *Salmonella* spp.; *Staphylococcus aureus*; *Listeria monocytogenes*; Enterohemorrhagic *Escherichia coli*; *Campylobacter jejuni/coli*; *Yersinia enterocolitica*; *Vibrio vulnificus* and *Vibrio cholerae* 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 for 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

6. Test Methods

1) Sampling and Handling

(1) Sampling methods

Conduct sampling in accordance with “Chapter 7. Sampling and Handling Methods.”

(2) Test solution

Follow instructions in “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.3 Preparation of Test Solutions.”

2) Foreign matters

Test in accordance with “Chapter 8. General Test Methods, 1.2 Foreign Matters.”

3) *Escherichia coli*

(1) Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8 *Escherichia coli*.”

(2) To test *Escherichia coli* in drinking water for serving, filter a 250 mL of sample following the membrane filtration method, and place the filter paper

onto a EMB plate and culture overnight at 35°C. Once typical colonies are confirmed, perform identification in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.8.1 Qualitative Test of *Escherichia coli*, A. Limit Test.”

4) Bacterial count

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.5.1 General Bacterial Count.”

5) *Salmonella* spp.

(1) Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.11 *Salmonella* spp., C. Identification Test.”

6) *Staphylococcus aureus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.12 *Staphylococcus aureus*.”

7) *Listeria monocytogenes*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.15 *Listeria monocytogenes*.”

8) Enterohemorrhagic *Escherichia coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.16 Enterohemorrhagic *Escherichia coli*.”

9) *Campylobacter jejuni/coli*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.19 *Campylobacter jejuni/coli*.”

10) *Yersinia enterocolitica*

(1) Test in accordance with “Chapter 8. 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 in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.17 *Yersinia enterocolitica*, C. Identification Test.”

11) *Vibrio parahaemolyticus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.13 *Yersinia enterocolitica*.”

12) *Clostridium perfringens*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.14.2 Quantitative Test Methods for *Clostridium perfringens*.”

13) *Bacillus cereus*

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.18.2 Quantitative Test Methods for *Bacillus cereus*.”

14) Coliforms

Test in accordance with “Chapter 8. General Test Methods, 4. Microbiological Test Methods, 4.7.2 Quantitative Test Methods for Coliforms, A. Most Probable Number (MPN) Method.”

※ Membrane filtration method

1. Membrane filtration device and instrument

(1) Membrane filter

Use a membrane with a pore size of not more than 0.45 μm and a diameter of 47 mm.

(2) Filtration device

Use a filtration device which allows the insertion of membrane filter for filtration, and which can be sterilized.

2. Filtration of sample solution

Insert membrane filter (the side with grids facing up) into the sterilized filtration device correctly. Fix the funnel with a clamp, then perform filtration

by adding 250 mL sample solution into the funnel aseptically. Remove the filter paper using forceps. Incubate after carefully placing the filter paper on top of each culture medium to prevent the formation of air bubbles.

Chapter 7

**Sampling and Handling
Methods**

Chapter 7. Sampling and Handling Methods

1. Significance of Sampling

Sampling refers to the act of collecting samples from test object, and the collected samples are subjected to safety tests such as their conformance to the Standards/Specifications, contaminants, etc. 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 requesting tests from food testing and inspection institutions or livestock product testing and inspection institutions have significant implications, and therefore, persons with sufficient knowledge on sampling and handling methods, etc. shall perform the relevant duties.

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 the person specified in accordance with Article 32 of the “Food Sanitation Act” or Article 13 and Article 20-2 of the “Livestock Products Sanitary Control Act”, and Article 14 and Article 2-2 of the Enforcement Decree of the same Act (hereinafter referred as “sampler”).

- 2) Sampling shall be conducted to ensure representativeness of the test objects by using “Chapter 8. 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 sampler 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) Sampler 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, Chapter 3. Standards and Specifications for Foods Labelled and Sold as Those Intended for Infants/Young Children, Chapter 4. Standards and Specifications for Long Shelf-life Foods, and Chapter 5. Standards and Specifications for Each Food Product, rather than according to the Sampling Decision Table.
- (12) In case that the Minister of Food and Drug Safety deems it necessary to strengthen the inspection of hazardous substances due to reasons such as

strengthening the inspection of hazardous substances, nonconformities, and risk information, it is possible to request additional samples to be collected and inspected.

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 homogeneous 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

Sampler shall attach sampling statements provided in “Chapter 8. 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 8. 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 ($5^{\circ}\text{C} \pm 3$ 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 testing and inspection institution or livestock product testing and inspection institution 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.
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	○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.

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 35,001 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	
1,001~10,000	20	6	
10,001~35,000	32	10	
Not less than 35,001	50	16	

(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.