Food Code

2015

MINISTRY OF FOOD AND DRUG SAFETY

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Article 1. General Provisions

Article 1. General Provisions

1. General Rules

This Food Code shall be principally interpreted and applied by general provisions, except as otherwise specified.

1) This Food Code contains the following items.
   (1) Standard about methods of manufacturing, processing, using, cooking and storing foods and specification of food components under the regulations of Paragraph 1 in Article 7 of Food Sanitation Act.
   (2) Labeling standard about food and food additives, utensil, container, packaging and genetically modified food under the regulations of Paragraph 1 in Article 10 of Food Sanitation Act.
2) Weights and measures shall be applied by the metric system and are indicated in following codes.
   (1) Length : m, cm, mm, μm, nm
   (2) Volume : L, mL, μL(ℓ , mℓ, μℓ)
   (3) Weight : kg, g, mg, μg, ng, pg
   (4) Area : cm^2
   (5) Calorie : kcal, kj
3) Weight percentage is indicated with the symbol of %. However, when indicating material content (g) in 100 mL solution will be expressed as w/v% and indicating material content (mL) in 100 mL solution will be v/v%. Weight parts per million may be indicated with the symbol of mg/kg, ppm, or mg/L.
4) Temperature indication adopts Celsius (˚C) type.
5) Standard temperature is defined as 20˚C, and ordinary temperature as 15~25˚C, and room temperature as 1~35˚C, and slightly warm temperature as 30~40˚C.
6) Except as otherwise specified, cold water is defined as water of 15˚C or lower, hot water as water of 60~70˚C, boiling water as water of about 100˚C, and heating temperature "Heating in/under water" is, except as otherwise specified, defined as about 100˚C and the water can be replaced with steam around 100˚C.
7) Cold and dark place, except as otherwise specified, means a place of 0~15˚C without any light.

8) Water used in the test is, except as otherwise specified, distilled water or purified water.

9) Solution, of which the solvent is not marked, means aqueous solution.

10) Decompression, except as otherwise specified, means the pressure of 15 mmHg or lower.

11) pH is, except as otherwise specified, determined as acidic, alkaline or neutral by Litmus test or pH meter (glass electrode). Strongly acidic is defined as lower than pH 3.0, weakly acidic as pH 3.0 or higher but lower than 5.0, slightly acidic as pH 5.0 or higher but lower than 6.5, neutral as pH 6.5 or higher but lower than 7.5, slightly alkaline as pH 7.5 or higher but lower than 9.0, weakly alkaline as pH 9.0 or higher but lower than 11.0, and strongly alkaline as pH 11.0 or higher.

12) Indication of solution concentration such as (1→5), (1→10), (1→100), etc. means that solid reagent of 1 g or liquid reagent of 1 mL is dissolved in solvent to produce each 5 mL, 10 mL, 100 mL, etc. Indication such as (1+1), (1+5), etc. means that solid reagent of 1 g or liquid reagent of 1 mL is mixed together with solvent of 1 mL or 5 mL. If solvent is not marked, solution is diluted by water.

13) Indication of mixture such as (1:1), (4:2:1), etc. means the mixed volume ratio of liquid reagent or the mixed weight ratio of solid reagent.

14) When measuring the number of water drops an instrument, which makes 20 drops of distilled water at 20˚C weights around 0.9~1.1g, shall be used.

15) Nessler tube is a flat bottom tube, which is made with colorless glass of inner diameter (ID) 20 mm, outer diameter (OD) 24 mm, and length 20 cm from its bottom to the end of stopper, with its volume of 50 mL. The difference between scales in each tube shall not exceed 2 mm.

16) Atomic and molecular weights are based on the latest Table of Standard Atomic Weights.

17) When calling a pass/fail the result through the comparison between acquired value from test (experimental value) with specified value in test(standard value), the experimental value shall be rounded off to the nearest whole number in one place number more than standard value and then compared to decide against standard value. Indication of standard value such as a~b means the range from not less than a to not more than b.

18) “Precisely measuring” weight is said to measure weight to the point of 0.1 mg, 0.01 mg, or 0.001 mg in consideration of minimum weight unit. “Accurately measuring” weight is said to measure the weight of specified value up to its original digits.

19) Indication of sampling quantity with “about” is said to take the sample of recorded quantity in a range of 90~110%, except as otherwise specified.

20) Record of “constant weight” in drying or heating means that weight difference between weight firstly measured in drying or heating and weight secondly measured in one more drying or heating for one hour shall be within 0.1% of firstly measured weight. However, if the weight difference is not more than 0.5 mg in measuring by chemical balance or not more than 0.01 mg by micro-chemical balance, it is regarded as “constant weight”.

21) Desiccator's drying agent is silica gel (silicon dioxide), except as otherwise specified.

22) Test, except as otherwise specified, shall be performed at the normal temperature and observed within 30 seconds after operation. However, test, which is affected by temperature, shall be performed at a standard temperature.

23) “Tar color” means Food Green No. 3 and its aluminum lake, Food Red No. 2 and its aluminum lake, Food Red No. 3, Food Red No. 40 and its aluminum lake, Food Red No. 102, Food Blue No. 1 and its aluminum lake, Food Blue No. 2 and its aluminum lake, Food Yellow No. 4 and its aluminum lake and Food Yellow No. 5 and its aluminum lake.

24) “Preservatives” described in Article 5 mean refers to “dehydroacetic acid and its salts (sodium), sorbic acid and its salts (potassium and calcium), benzoic acid and its salts (sodium, potassium, and calcium), p-hydroxybenzoates (methyl and ethyl) and propionic acid and its salts (sodium and calcium).”

25) “Antioxidants” described in Article 5 refers to “butylated hydroxy toluene, butylated hydroxyanisole, tert-butylhydroquinone, propyl gallate, sodium EDTA, and calcium disodium EDTA.”

26) This Food Code classifies processed foods following Food Class (Large Classification), Food Species (Medium Classification), and Food Type (Small Classification).

Food Class : Beverages and seasoning foods etc, which are classified in ‘Article 4. Standards and Specifications for General Processed Food outside the Scope of Standards

and Specifications for Each Food' and 'Article 5. Standards and Specifications for Each Food Product.'

Food Species : Processed grain, fruits and vegetable beverages, carbonated beverages, vinegar, etc. which are classified in Food Class.

Food Type : Fruit · vegetable juice concentrates, fruit · vegetable juice, fermented vinegar, synthetic vinegar, etc. which are classified in Food Species (including fine classification) (however, food species without food type can be said to be food type).

27) Pass/Fail determination about standards & specifications designated in this Food Code is principally performed and judged by the test method specified in this Food Code. However, when a certain method is judged to be more detailed·accurate than the test method specified in this Food Code, the method can be used. Specially, a test of microorganism, toxin, etc. may be performed with commercial kit. However, when its result is suspected, the test shall be performed and judged through the specified method under this Food Code.

28) Pass/Fail determination about hazardous substances such as pesticide residues, veterinary drugs, heavy metals, etc. of which standards & specifications are not specified in this Food Code, may tentatively conform to CODEX (CAC: Codex Alimentarius Commission). Where there is no CODEX regulation, MFDS Commissioner can make specification and determination after thoroughly reviewing relevant data about materials such as foreign countries' standards and specifications, Acceptable Daily Intake (ADI), related food intake, etc.

29) In case of no test method specified in 'Article 5. Standards & Specifications for Each Food Product' of this Food Code, relevant test method of 'Article 9. General Testing Methods' can be applied. In the event that standards & specifications are not designated in this Food Code or test method is not stated even though standards & specifications are designated, test can be performed in accordance with the test methods stated in CODEX regulation, AOAC (Association of Official Analytical Chemists), and PAM (Pesticide Analytical Manual). In cases where the above test method is not available, authorized test methods, which are specified in other regulations, internationally recognized and accepted with the approval of MFDS commissioner, can be applied and then the test method shall be submitted.

30) As specified in ‘Article 8. Sample Collection and Handling method’, if any sample fails to pass the test, among several samples tested under same condition, all of the samples tested will not be acceptable.

31) For those who want to newly establish, change or exempted from the maximum residue limit (MRL) for pesticide or veterinary drugs in food should register according to the [Appendix 8] of “Guideline for the establishment of maximum residue limit for pesticide and veterinary drug in food.”

32) If the pesticide and veterinary drug residue in food specified in Food Code identified by method with specified limit of quantification is below the limit of quantification, will be determined as non-detected.

33) In the case of leakage accident of radioactive materials, the radionuclides to be managed are selected based on the following principles.

(1) Radioactive iodine and cesium, the representative indicator of contamination, are preferentially selected and then the emitted radionuclides are selected according to the type of the leakage accident.

(2) If radioactive iodine or cesium is detected, the contamination of other radionuclides (hereinafter ‘other’) such as plutonium, strontium, etc. may be determined. All or some of the radionuclides may be selected after reviewing the leakage status, half-life and harmfulness to human body comprehensively.

(3) The standards for other radionuclides shall be applied until one year past the end point of the accident (the point when the radioactive material is no longer leaked out due to the relevant radiation accident).

(4) If a thorough examination for other radionuclides is difficult to conduct, it can be substituted with a proof of non-contamination from the country where the accident has occurred.

34) Establishment of standards for hazardous contaminants shall be done according to ALARA (As Low as Reasonably Achievable) principle considering the total exposure rate, hazardous level and exposure share from the contamination level and intake amount of the hazardous contaminants in food.

35) The sugar contents (Brix°) of 100% extracts of fruits · vegetables used in beverages shall be as follows:

① Grape, Western pear : Not less than 11°

② Apple, lime : Not less than 10°

③ Mandarin, grapefruit, papaya : Not less than 9°

④ Pear, guava : Not less than 8°

⑤ Peach, apricot, strawberry, lemon : Not less than 7°

⑥ Plum, melon, Japanese apricot : Not less than 6°

⑦ Others : Based on literature references

2. Definition

1) “Definition” specifies individual food and the food, that is not classified into “Food Type”, may also be subject to the Standards & Specifications of individual food provided it is in conformity to its “Definition”. However, in case where separate Standards & Specifications are specified, the food must be subject to that Standards & Specifications.
2) “A, B, C…, etc.” is a concept, in which general things are stated as an illustration concept and otherwise relevant things are included.
3) “A or B” can be interpreted either “A and B”, “A or B”, or “only A” or “only B”, and the same applies to “A, B, C or D”.
4) “A and B” must satisfy both A and B.
5) “Appropriate ○○ step (process)” refers to a necessary process for a manufacturing and processing an individual food and is called as general method or a scientifically sufficiently proven method to acquire the safety & wholesomeness of food.
6) “Food and Food Additive shall meet their Standards and Specifications” means they should meet the corresponding standard and specifications.
7) “Shall be stored and managed” implies that food is stored and managed in a manner to sufficiently maintain its quality in accordance with the property of its raw material or product itself.
8) “Within the limits of possibility”, “be advised to” and “be possible to” refer to the recommendations to be set in order to induce the development of hygiene level and quality.
9) “Method with equivalent effective to, or more effective than this” is a method to be capable of maintaining nutritional or sensory quality as well as hygiene as a general method or a scientifically sufficiently proven method except for stated method.
10) “○○%, not less than ○○%, not more than ○○%, less than ○○%”, which is stated in the Definition or Food Type, refers to the criteria for the combination of raw material as ingredient mixture standard.
11) “Characterizing ingredient” as a raw material for processed food refers to the edible part of single food stated in Article1. 3 Classification of Food Raw Material.
12) “Dried product (drained product)” refers to a product with water content of 15% or less as drained product, which remains after drying raw material, unless other specification is

designated.

13) “Solid food” includes paste or syrup or gel food, which is not drunk directly and also a food with solid appearance.

14) “Liquid or liquid food” refers to a food product in liquid state with liquidity or a product produced by concentrating the food in liquid state.

15) “Pill food” refers to a food product in a spherical shape.

16) “Granule food” refers to a food product in a granular shape.

17) “Powder food” refers to a food of which particle size is smaller than that of granules.

18) “Fried or oil-treated products” refers to a food manufactured/processed by oil-treatment such as edible oil and fat spray after forming or frying it with edible oil and fat in the manufacturing process.

19) “Sell by date” refers to a maximum period in which the product can be sold to customers.

20) “Specification” refers to the specification of the final product.

21) “Must not be detected” means not to be detected by test, which is specified in this Code.

22) “Originated from raw material” can be acknowledged when provided or recognized data or a literature proves that the raw material is in conformity to each Standards and Specifications or it is inevitably originated from good-quality raw material.

23) Preservation temperature of frozen and chilled food means, except for separately specified in this code, that frozen temperature is lesser than -18˚C and chilled temperature is 0~10˚C.

24) “Foreign material” refers to substance, which is not the component of normal food, such as an arthropod and its egg, larva and its excrement, rodent and insect's trace, animal's fur, excrement, parasite and its egg as animal foreign material; different plants and their seeds, mold, straw, chaff, etc. as botanical foreign material; and soil and sand, glass, metal, ceramic fragment, etc. as mineral foreign material.

25) “Pasteurization” means to destroy the nutritive cell of microorganisms, such as bacteria, yeast, mold, etc. except as otherwise specified.

26) “Sterilization” means to destroy the nutritive cells and spores of microorganisms, except as otherwise specified.

27) “Sealing” means to block the ventilation of air to inside and outside of container or packaging.

28) “Supercritical extraction” means the extraction of an edible food component from a food raw material or food using carbon dioxide at the above critical temperature and critical pressure.

29) “Processed food” refers to a food manufactured, processed, and packaged by adding food or food additives to food raw materials (agricultural, forestry, livestock, or marine products), transforming food raw materials (such as grinding or cutting) till their original forms cannot be recognized, or mixing such transformed ones or adding food or food additives to such mixture. However, where, without the use of food additives or other materials, the agricultural, forestry, livestock, or marine products are simply cut, peeled, salted, ripened, or heated (except the cases where heating is performed for sterilization or heating causes significant changes to those products) till their original forms can be recognized or where sanitary risks from treatment processes are not expected and food raw materials are simply treated so as to allow organoleptic identification of food quality, such food products are excluded from the definition of the processed food.

30) “Water for food” means water used in the manufacturing, processing, and cooking of foods.

31) “Long-term storage food” refers to a food manufactured and processed to allow long-term distribution and storage.

32) “Deep sea” means the sea of which the depth is more than 200 meters where the sunlight is not reached.

33) “Alcohol treatment” means the method of dipping a food product in alcohol or spraying a product with alcohol during the manufacture of the food product.

34) “Geonsam” refers to fresh ginseng dried under sunlight, hot air, or another method without cooking it. “Taegeuksam” refers to fresh ginseng cooked with water or cooked and dried using other method. “Hongsam” refers to fresh ginseng dried after cooking it by steaming or other method. "Ginseng Concentrate and Hongsam Concentrate" mean the ginseng product made by performing extraction of green ginseng, Geonsam, and Hongsam with water, alcohol, or a mixture of water and alcohol, filtering the extract, and concentrating the filtrate.

35) “Bivalves” means shellfish consisting two shells, such as clam, oyster, mussel, scallop, sea mussel, red shell, comb pen shell, egg cockle, hen clam, surf clam, razor clam, short-necked clam and butter clam.

36) “Chilled-temperature measurement value” means the highest value of temperature measured inside refrigerator or cold storage equipment.

37) “Yoomilkwa” refers to a product which is made by oil-treating a dough made with wheat flour or rice flour as a main ingredient and sesame oil, sugars, honey or alcoholic beverages added to it. After the oil-treatment sugar or honey is added then covered with foods such as pine nuts.

38) Terms (n, c, m, M) used for specifications regarding microorganisms are as following.

(1) n : Number of sample units to be taken

(2) c : The maximum allowable number of sample units. It is the number of sample which exceeds the acceptable level (m) and below the maximum acceptable limit (M). If the number of sample unit which has a result exceeding m and below M is not more than c, it is determined as acceptable.

(3) m : The acceptable level of microorganism. If all results are below m, it is determined as acceptable.

(4) M : The maximum acceptable limit of microorganism. If there is any result exceeding M, it is determined to be unacceptable.

※ Unless m and M are specifically mentioned, it is the colony forming unit (CFU) per 1 g or 1mL.

3. Classification of Raw Food Materials

The following classification of raw food materials is a general classification but may not be applied according to the characteristics and purpose of food and its raw materials.

1) Plant-derived materials

Large Classification	Small Classification	Products
Cereal grains	-	Rice, Barley, Wheat, Buckwheat, Foxtail millet, Sorghum, Corn, Oat, Rye, Job's tear, Proso millet, Japanese-barnyard millet, Quinoa, Triticale, etc.
Root and tuber vegetables	-	Potato, Sweet potato, Taro, Yam, Cassava(Tapioca), Konjac, etc.
Legume vegetables	-	Soybean, Mung bean, Pea, Kidney bean, Cowpea, Red bean, Broad bean, Pigeon Pea, Lima bean, Chick pea, Green bean, Lentils, Jack bean, etc.
Nuts and seeds	Peanuts and tree nuts	Chestnut, Walnut, Ginkgo nut, Pine nut, Peanut, Almond, Pecan, Cashew nut, Hazelnut, Macadamia, Pistachio, Acorn, etc.
	Oilseeds	Sesame, Cottonseed, Sunflower seed, Pumpkin seed, Perilla, Olive, Evening primrose seed, Cotton seed, Rapeseed(Canola), Palm, Safflower seed, etc.
	Seeds for beverages and sweets	Coffee beans, Cacao beans, Cola nut and Guarana
Fruits	Pome	Apple, Peal, Chinese quince, Persimmon, Pomogranate, etc.
	Citrus	Mandarin orange, Orange, Grapefruit, Lemon, Citron(*Citrus junos* Siebold), Lime, Kumquat, Trifoliate orange, Citron (*Citrus medica* L.), etc.
	Stone	Peach, Jujube, Apricot, Prune, Japanese apricot, Cherry, Chinese bush cherry, Cornus fruit, Fruits of Chinese magnolia vine, etc.
	Berries	Grape, Strawberry, Fig, Mulberry, Lowbush cranberry, Currant, Berry, Fruit of Chinese matrimony vine, Fruit of Crimson glory vine, Korean Bramble (including wild strawberry and raspberry), Clematis berries, etc.
	Tropical fruits	Banana, Pineapple, Kiwi, Avocado, Papaya, Date palm, Mango, Guava, Coconut, Lychee, Passion Fruit, Durian, Mangosteen, etc.
Vegetables	Brassica	Chinese cabbage, Cabbage, Broccoli, etc.
	Leafy vegetables	Lettuce (*Lactuca sativa* L.), Lettuce (*Lactuca sativa* L. *var. capitata* L.), Spinach, Perilla leaf, Crown daisy, Curled mallow, Leaf beet, Butterbur, Radish (including young radish, leaf),

		Pepper leaf, Chamnamul (Pimpinella brachycarpa Nakai), Kale, Chinese mustard, Leaf mustard, Shepherd's purse, Chicory (leaf), Endive, Parsley, Pumpkin leaf, Asitaba (Angelica keiskei (Miq.) Koidzumi), Korean wasabi (leaf), Amaranth, Korean lxeris, Burdock leaf, Toscano leaf, Korean angelica leaf, Mugwort, Korean solomon's seal (leaf), etc.
	Leaf and stem vegetables	Spring onion, Leek, Dropwort, Stem of sweet potato, Stem of taro, Braken, Asparagus, Celery, Bamboo, Kohlrabi, Day lily, Wild chive, Green garlic (including stalk of garlic flower), Stonecrop, Rakkyo, etc.
	Root vegetables	Radish (root), Onion, Garlic, Carrot, Ginger, Lotus root, Burdock, Balloonflower, Bonnet bellflower, Sugar beet, Turnip, Parsnip, Yacon, Korean wasabi (root), Chicory (root), Ginseng (including wood-cultivated ginseng), Korean solomon's seal (root), etc.
	Fruiting vegetable, cucurbits	Cucumber, Pumpkin, Oriental melon, Watermelon, Melon, Autumn squash, etc.
	Fruiting vegetable, other than cucurbits	Tomato, Cherry tomato, Hot pepper, Pimento (including paprika), Egg plant, Okra, Unripe beans, etc.
Mushrooms	-	Oyster mushroom, Pine mushroom, Oak mushroom, Cultivated mushroom, Cauliflower coral, Winter mushroom, Tree Ear, Lingshi mushroom, King oyster mushroom, Sang-hwang mushroom (*Phellinus linteus* (Berk. & M.A. Curtis) Teng), Parasol mushroom, Pholiota nameko, Golden horn mushroom, Seogi mushroom (*Umbilicaria esculenta* (Miyoshi) Minks), etc.
Spices	-	Mustard, Cinnamon, Cinnamon Bark (Cinnamomi Cortex), Coriander, Wasabi, Rosemary, Myrrh, Basil, Peppermint (*Mentha arvensis* Linne var,), Thyme, Saffron, Chinese pepper, Peppermint (*Mentha piperita* L.), Laurel, Nutmeg, Clove, Befsteak plant, Fennel, Black pepper, Cumin, Chaparral, Turmeric, Cardamom, etc.
Tea	-	Tea
Hop	-	Hop (*Humulus lupulus* L.)
Algae	-	Tosakanori, Sea lattuce,
Other plants		Sugarcane, Sweet sorghum, Sicklepod, Yerba mate, Jasmine, Asian plantain, Easter Lily, etc.

2) Animal-derived materials

Large Classification	Medium Classification	Small Classification	Products
Animal products	-	Meat	Beef, Pork, Lamb, Goat meat, Rabbit meat, Horse meat, Venison, Chicken meat, Pheasant meat, Duck meat, Goose meat, Turkey meat, Quail meat, etc.
	-	Milk	Milk, Goat milk, etc.
	-	Egg	Chicken egg, Duck egg, Quail egg, etc.
Fishery products	Fish	Freshwater fish	Snake head, Amur catfish, Chinese muddy loach, Crusian carp, Pond smelt, Golden mandarin fish, Carp, Stone moroko, Arctic lamprey, Leather carp, etc.
		Pelagic fish	Shark, Chum salmon, Ayu sweetfish, Japanese eel, etc.
		Marine fish	1) Ray, Flounder, Largehead hairtail, Croaker, Chub mackerel, Pacific saury, Japanese flyingfish, Bastard halibut, Spottybelly greenling, Japanese seabass, Tuna, Pacific cod, Japanese sandfish, Sea bream, Yellowfin goby, Anchovy, Alaska pollock, Brown croaker, Tongue sole, Yellowtail, Big-eyed herring, Glass fish, Silver pomfret, Globe fish, Dark-banded rockfish, Korean rockfish, Common conger, Japanese Spanish mackerel, Black cow-tongue, Common grey mullet, Grub fish, Korean sandeel, Black cod, Arabesque greenling, Horse mackerel, Dotted gizzard shad, Sardine, Croaker, Slender sahd, Threadsail filefish, Pacific herring, Skate ray, etc. 2) **Abbysal fish** : Marbled rockfish (including Atlantic ocean perch, excluding Littoral fish species), Broad alfonsino, Broadnose sevengill shark, Pelagic tresher, Salmon shark, Mako shark, Piked dogfish, Common hammerhead, Ghost shark, Great blue shark, Blacktip shark, Sawedged perch, Pink cusk-eel, Black oreo (*Allocyttus niger*), Smooth oreo dory (*Pseudocyttus maculates*), Orange roughy (*Hoplostethus atlanticus*), Opah, Salad

			eel (excluding neritic fish), Silver warehou, Patagonian toothfish, Southern hake (limited to New Zealand flock), etc. 3) **Tunas and swordfish** : Bluefin tuna, Souther bluefin tuna, Albacore, Bigeye tuna, Yellowfin tuna, Indo-Pacific sailfin, Striped marlin, Black marlin, Indian spearfish, Braodbill, White marlin, Skipjack tuna, Black skipjack, Bullet tuna, Bullet mackerel, etc.
	-	Fish eggs	Alaska Pollack's roe, Chum salmon's roe, Chinese sturgeon's roe, etc.
	Invertebrates	Crustaceans	Shrimp, Crab, Lobster, Korean fresh water crayfish, Three-spined shore crab, Krill, etc.
		Mollusks	1) **Shellfish** : Oyster, Hard shelled mussel, Blood cockle, Marsh clam, Spiny top shell, Conch, Clam, Abalone, Japanese littleneck, Shellfishes, etc. 2) **Cephalopod** : Giant Pacific octopus, Squid, Long arm octopus, Golden cuttlefish, Beka squid, Webfoot octopus, etc. 3) **Other Mollusks** : Spoon worm (*Urechis unicinctus*), Korean common sea hare (*Aplysia kurodai*), Jellyfish, etc.
		Echinoderms	Sea urchin, Sea cucumber, etc.
		Tunicates	Korean common sea squirt, Warty sea squirt, Wrinkled sea squirt, etc.
Other animals	-	Reptiles and amphibians	Edible soft shell turtle, Edible frog, etc.
	-	-	Edible land snail, etc.

Article 2. Common Standards and Specifications for General Foods

Article 2. Common Standards and Specifications for General Foods

1. Application of Standards and Specifications

The following standards and specifications shall apply to the foods, food additives (hereinafter referred to as "foods, etc.") listed in this Food Code.

1) Foods, etc. specified in 'Article 4. Standards and Specifications for General Processed Foods outside the Scope of Standards and Specifications for Each Food Product', 'Article 5. Standards and Specifications for Each Food Product,' shall apply their standards and specifications preferentially.

2) Foods, etc. shall meet the requirements specified in 'Article 2. Common Standards and Specifications for General Foods'. However, if some requirements are not necessarily required or are not practical due to the nature of the foods, etc., the requirements may be selectively applicable.

3) The long-storage foods shall meet the standards and specifications of the above 1) and those specified in 'Article 3. Specifications for Long Shelf-life Foods (except non-heat-processed meat or fish products).' If standards and specifications are overlapped, the stricter ones shall be applied.

4) Meat products among the instant manufacture and processing foods, ice creams, and livestock products manufactured, processed, and distributed in accordance with the Livestock Products Sanitary Control Act shall meet the Processing Standards and Component Specifications of Livestock Products.

2. Standards for Raw Food Materials

1) Requirements of Raw Materials

(1) Raw material shall have satisfactory quality and freshness, and not be decomposed, deteriorated or contaminated by toxic · hazardous matters, etc., and shall be safe.

(2) Raw material with 'satisfactory quality and freshness' refers to a product with bruised and damaged portion removed to make it suitable for consumption in case of agricultural · forest products. For fishery products, it refers to a product produced to be complying with

'Specifications for Fishery Products' in this Food Code. For seaweeds, it refers to a product which shape and color are not damaged to be able to recognize its type by its appearance. As for animal products, it refers to a product produced to be complying with 'Processing Standards and Component Specifications of Livestock Products.'

(3) 'Decomposed and deteriorated' of raw material refers to the formation of foul odor and harmful substances through the decomposition of protein, fats, etc. by microorganisms and such. Or it refers to the changes in the unique smell, color, appearance or texture of the food.

(4) When natural raw material which do not need to be registered for food manufacturinge and processing is treated directly to use as a raw material of processed food product, foreign materials such as soil, sand, dust etc., shall be sufficiently removed and shall be washed if necessary by water for food and its non-edible parts shall be sufficiently removed. In this case, 'non-edible part' refers to a specific part of the raw material which is not generally consumed and it includes the parts of edible portion which unique quality is deteriorated by damages such as blight.

(5) In case of purchasing raw food materials from businesses which need to be permitted, registered or reported, the material shall have registered for food manufacturing business or completed an import report. In addition, it shall comply with the relevant standards and specifications and the poor and adulterated food (ex. expired product) shall not be used as the raw material.

(6) Foods and food additives shall meet the applicable standards and specifications, the alcoholic products shall meet the quality standards as specified in the Liquor Tax Act, the ginseng and red ginseng shall meet the standards as specified in the Ginseng Industry Act, the wood-cultivated ginseng shall meet the standards as specified in the Forestry and Mountain Villages Development Promotion Act and the livestock and their processed products shall meet the standards as specified in the Livestock Products Sanitary Control Act. However, if the standard and specification for hazardous contaminants such as heavy metals are stricter for final product than that of the raw materials, appropriate raw materials should be used to meet the standard and specification of the final product.

(7) Water for food shall meet the drinking water standards as specified in the Drinking Water

Management Act.

(8) Raw material used in Eicosapentanoic acid (EPA) and/or DocosaHexaenoic Acid (DHA) products, shall not contain ethyl- or methyl ester chemicals of this fatty acid other than triglyceride with an aim to control those contents.

(9) Lactic acid bacteria used in food containing lactic ferments shall be edible and hygienically safe.

(10) Chlorella as raw material for chlorella food and spirulina as the raw material for spirulina food shall be purely cultivated.

(11) Raw material used in chitosan processed food shall be made from a shell of crustacean (crab, shrimp, etc.) that is capable of extracting non-polluted chitosan.

(12) Raw material used in processed propolis extract food shall be collected by honeybees and not be polluted.

(13) The minimum quantity (not more than 5% of the extract may be used but daily maximum intake cannot exceed 6 g) of *Garsinia Cambogia* rind extract shall be used as the adjunct raw material for weight control food.

(14) Fishery products of animal nature shall be refrigerated or frozen. Frozen surimi shall be preserved at not more than -18˚C and easily deteriorated raw material, such as olive flesh for compressed olive oil, shall be not more than -10˚C.

(15) In case of using crushed material as raw material, it should have good freshness and shall not be decomposed and deteriorated or polluted by foreign materials.

(16) Ginseng or Red Ginseng Products

① Dried young ginseng (chunmisam), ginseng seedling, ginseng skin and ginseng cake shall not be used. Diseased ginseng can be used after removing the diseased parts.

② Foreign materials shall not be included in ginseng leaf and the leaf, stem or flower of diseased ginseng shall not be used.

③ Fresh ginseng of intact use shall be at least 3-year-old (except hydroponic ginseng specified in Ginseng Industry Act) and diseased or damaged ginseng cannot be used.

(17) If it is intended to use as raw materials the agricultural, livestock, and fishery products cultivated or raised using the GMO technology that selects useful genes from an organism's

genes and inserts them into another organism, such materials shall pass the safety evaluation process in accordance with the "Regulation on Safety Evaluation, etc. of Genetically modified Foods" as specified in Article 18 of the Food Sanitation Act.

(18) Use standard for lacquer tree (*Rhus verniciflua* Stokes)

① Lacquer tree can only be used as an ingredient for the products used for cooking ‘chicken with lacquer tree’ and ‘duck with lacquer tree’ and it shall be used as the following form.

ⓐ Water extract

ⓑ Tea bag for producing water extract

② Also, the water extract of lacquer tree with urushiol component removed using *Formitella fraxinea* shall be used only before the fermentation process for soy sauces and pastes, brewed vinegar, takju, yakju, sake and fruit wine and the allowed usage amount is as following.

ⓐ Soy sauce and pastes and brewed vinegar : not more than 10.0% of the final product’s weight, based on the weight of lacquer tree used for the extraction process

ⓑ Takju, yakju, sake and fruit wine : not more than 2.0% of the final product’s weight, based on the weight of lacquer tree used for the extraction process

③ In this case, the urushiol component shall not be detected in the products made with lacquer tree.

(19) Others

① Grayanotoxin III shall not be detected in honey.

2) Acceptance Criteria for Raw Material

(1) The following materials shall not be used in manufacturing, processing, or cooking of food products. However, those authorized by the Commissioner of the Ministry of Food and Drug Safety may be used.

① Those not collected, handled, processed, manufactured, or controlled for the purpose of being used for food.

② Those of which the safety and suitability as raw materials for use in food products are not

established.

③ Others determined as inappropriate for use in food products by the Commissioner of the Ministry of Food and Drug Safety

(2) For those not falling into one of three categories in the above (1), the Commissioner of the Ministry of Food and Drug Safety shall determine if a specific material can be used as raw material for food products. However, if there is new information relating to safety, the relevant material will be subjected to re-consideration to determine its suitability for use in foods.

(3) If a material does not have any toxicity or adverse reactions and it has any references demonstrating that it has been used in foods in addition to its uses for the purposes of appetite loss or pharmacologic effects, it may be determined to be used as “usable raw material” or “raw materials for limited use”.

(4) The following materials may be determined as "raw materials for limited use" and their use may be limited to specified food products.

① Those with the history of being used in specific food products, such as spices, water-extraction teas, and alcohols.

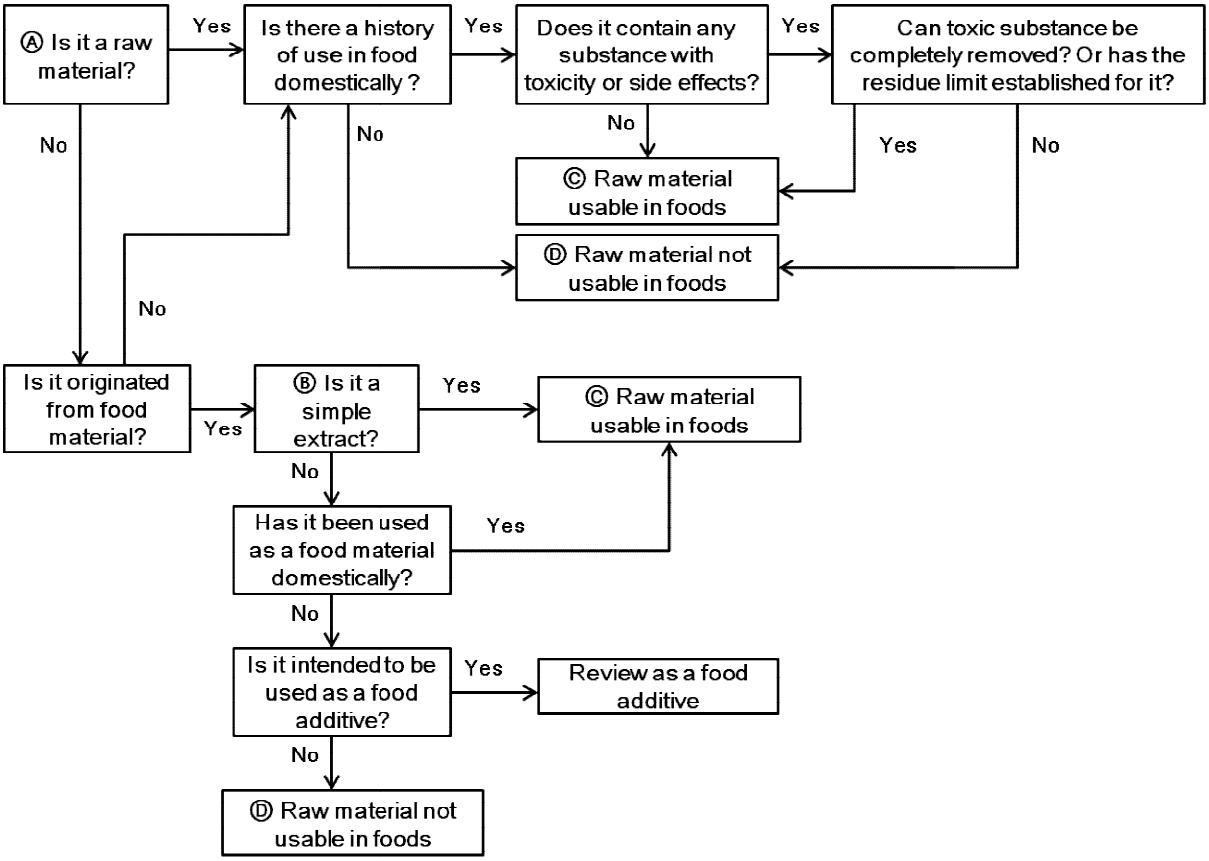
② Those that can be used after complete removal of toxic substances or others causing adverse reactions.

③ Those for which limits for residual toxic substances or others causing adverse reactions have to be established.

(5) Documents to be submitted to get approval of raw materials for use in foods.

① If it is intended to submit documents to get approval, the following 「Decision Tree To Determine the Suitability as Raw Materials for Use in Foods」 may be useful.

「Decision Tree To Determine the Suitability as Raw Materials for Use in Foods」



Ⓐ Source materials : Unprocessed materials of animal or plant origin

Ⓑ Simple Extracts : Extracts(including juice) obtained without removal or separation of specific components extracted from the raw material using a physical or solvents (water, alcohol, carbon dioxide)

Ⓒ Raw Materials Usable in Foods : can be used as "raw materials allowed in food" or "raw materials for limited use"

Ⓓ Raw Materials Not Usable in Foods: cannot be used as a raw material in food but it is possible to apply as the temporary standards and specification for food materials according to 「The Temporary Standards and Specification for Foods」 (in relation to Article 5 in Enforcement Regulations of Food Sanitation Act)

② The following documents shall be submitted.

Ⓐ General characteristics of raw materials

ⓐ Name of raw material or synonyms

ⓑ Scientific name of source material, parts to be used

ⓒ Data showing the characteristics of raw materials, such as composition, photos, and habitats

ⓓ Intended use in foods

Ⓑ References showing the use in foods

ⓐ Data demonstrating that a raw material has been consumed as domestically

Ⓒ Documents to be submitted for the materials with toxic substances or other adverse reactions

ⓐ General information on toxic substances or others causing adverse reactions, such as names, molecular structures, and other characteristics

ⓑ Data on toxicity or adverse reactions

ⓒ Data on analytical methods of such toxic substances

ⓓ If such toxic substances or others causing adverse reactions are completely removed, data demonstrating such removal

ⓔ If limits for toxic substances or others causing adverse reactions are established in foreign countries, the relevant country's regulation and reason for establishment of such limits, and data on contents in finished products

(6) Raw materials that can be used in Food

① The list of “Raw materials allowed in food” is provided in [Annex 1].

(7) Raw materials that can be used in food with limitations

① “Raw materials for limited use” means those that can be used in foods in accordance with the specified conditions for use.

② Raw materials categorized as “raw materials for limited use” shall be used in compliance with the specified conditions for use. If such conditions are not provided, the following requirements shall be followed.

Ⓐ Animals, plants, and others categorized as "raw materials for limited use" shall be added to the mixing process at the percentage of less than 50% of total materials weight(except the mixing water).

Ⓑ If raw materials for limited use are mixed together, the total amount of such mixture shall not exceed 50% of the food product(except the mixing water).

Ⓒ However, in the manufacture of teas, beverages, alcoholic products, or spices and if such products include only one plant-derived raw material categorized as one for limited use, the material may be used as “Raw materials allowed in food”.

③ The list of "raw materials for limited use" are provided in [Annex 2].

(8) “Raw materials not usable in foods”

① “Raw materials not usable in foods” means those that cannot be used in the manufacture, processing, or cooking of food products.

② The list of "raw materials not usable in foods" are provided in [Annex 3].

3. Manufacturing and Processing Standards

1) Machine, utensil and other facilities, which are utilized in food manufacturing and processing, shall be hygienically maintained and managed.

2) Water for food, shall be in conformity to water standards under the Drinking Water Management Act. However, raw water suitable for「Development and Management of Deep Sea Water Act」 may be used for bean-curds, kimchies and pickles and the concentrated water may be used for bean-curds, sauces, soy sauces or pastes, kimchies and pickles and the demineralized desalted water may be used for soy sauces or pastes and alcoholic beverages.

3) Water for food may be treated by water treatment agents specified in the Drinking Water Management Act or through the precipitation, filtration [activated carbon, sands, ceramic, elvan, diatom, microfilter, ultra filter, reverse osmosis, or ion exchange resin], ozone sterilization, ultraviolet sterilization, electrolysis, chlorine sanitation, or other methods appropriate for the intended use of the food product.

4) The proper precaution is demanded strongly to prevent contamination of foreign materials or pathogens under food manufacturing and processing.

5) Foods may be extracted only with use of water, alcohol, a mixture of water and alcohol, or carbon dioxide. However, if individual specifications are established in the Food Additive Code, such specifications shall be followed.

6) Fish shall be stored at -18˚C or less after the non-edible fragments other than the flesh of fish fully removed.

7) Thawing of refrigerated raw material shall be hygienically performed at a clean place designated for thawing.

8) Veterinary drugs cannot be used in the manufacturing, processing, storage, and distribution of food.

9) Processed food shall be hygienically wrapped to prevent contamination by microbes.

10) Food shall not be manufactured in the form of capsule or tablet. However, confectionaries, chocolates edible salt, soy sauces/pastes, composite seasonings and processed sugar products may be manufactured as a tablet form and edible oils and its processed products may be manufactured as a capsule. In this case, there should be no confusion to mistake them for medicine.

11) The residual amount of media used in culture of mushroom fruit bodies shall be not more than 10% of dried culture material.

12) Aloe husk shall not be used in the manufacture of food products.

13) Any solvents used in the manufacture of food products containing chitosan shall not be left in the food products.

14) Ginseng or red ginseng-containing products

① Soluble ginseng and red ginseng components used in the manufacture of ginseng or red ginseng teas shall contain no less than 60% of solids. For water-insoluble precipitates, the ginseng tea shall have not more than 3% of solids and the red-ginseng tea shall have not more than 2%. Such components shall be manufactured to have their unique tastes.

② Coloring agents shall not be used in the manufacture of the red-ginseng teas, liquid tea products containing red ginseng, or concentrated red ginseng products.

15) Any materials used to remove the moisture, odors, oxygen, or others from inside the food packaging for the purpose of improving the freshness shall be packaged in a material meeting the standards and specifications for utensils, containers, and packaging materials. They shall be packaged to prevent the migration of their substances into the food products.

16) Containers and packaging materials for food products shall be made by manufacturers who completed reporting their business to manufacture containers and packaging materials. However, this provision shall not be applicable if a food manufacturer produces the containers and packaging materials to be used in its food products.

4. Main Raw Material of Foods

1) "Main material" means raw material which is used in distinguishing and specifying from other food in consideration of the main purpose and characteristics, etc. of the individual food.

2) Food, in which the standard in mixing raw material is designated in 'Article 5. Standards and Specifications for Each Food Product', shall follow its standard. However, in case the standard in mixing raw material is 100%, the content of food additives shall be removed and a product to contain the additives shall be suitable to the product standards of 'Article 5. Standards and Specifications for Each Food Product.'

3) Dried or concentrated food which can be regenerated by adding water, the composition & weight ratio (%) of regenerated condition is applied.

5. General Standards and Specifications of Foods

1) Description

Food product should have its own unique color and should not have off-flavor or off-taste.

2) Foreign material

① Food shall not contain unhygienic material to be mixed with foreign material, which is not removed to required level in the treatment of raw material. However, foreign material such as other plant, the outer skin of raw plant or sand, which is not sufficiently removed in manufacturing · processing and remains, can be excluded within a range, in which the quantity of foreign material is a little and human health is not damaged.

② Iron filings as metallic foreign material shall be detected in foods not more than 10.0 mg/kg when tested according to the method for metallic particles described in Article 9. 9.2.1 마. In addition, any metallic particles of not less than 2.0 mm in length shall not be detected.

3) Food additives

(1) Operation standard of food additive in food shall comply with Food Additive Code.

(2) If a food additive that cannot be used in a food is derived from a raw material for which the food additive can be used, the restriction on the use of food additives may not be applied within the range of such deriving from the raw material.

4) Food poisoning bacteria

Food poisoning bacteria such as *Salmonella spp., Staphylococcus aureus, Vibrio paraphaemolyticus, Listeria monocytogenes,* Enterohemorrhagic *Escherichia coli, Campylobacter jejuni/coli, Yersinia enterocolitica* etc. shall not be detected in meat(raw material for processing is excluded) and processed food which is sterilized & pasteurized or can directly be consumed without further processing or thermal treatment. And *Tuberculous bacillus, Anthracnose bacteria* and *Brucella suis* shall not be detected in meat and meat products. However, if there are quantitative limits for food poisoning bacteria in 'Article 5. Standards and Specifications for Each Food Product', the relevant food shall meet the quantitative limits. And other processed foods shall meet the following limits of *Bacillus cereus and Clostridium perfringens*.

(1) *Bacillus cereus*

① Soy sauce/paste (except meju), sauces, composite seasonings, kimchies, salted and fermented seafoods, pickles and hard-boiled foods: not more than 10,000 per gram (The sterilized products shall be negative)

② Processed food consumed without further processing-or cooking among food products other than those listed in the above ① and food products for which specifications are not established : not more than 1,000 per gram (The sterilized products shall be negative)

(2) *Clostridium perfringens*

① Soy sauce/paste (except meju), red pepper powder or shredded red pepper, kimchies, salted and fermented seafoods, pickles, hard-boiled foods, composite seasonings, spice products,

vinegars, curry powder and curry (except liquid products) : not more than 100 per gram (The sterilized products shall be negative)

② Processed food consumed without further processing or cooking among food products other than those listed in the above ① and food products for which specifications are not established : shall be negative

5) Standards for heavy metals

(1) Maximum standard limits for heavy metals in agricultural products

Products	Lead (mg/kg)	Cadmium (mg/kg)
Cereals (except husked rice)	Not more than 0.2	Not more than 0.1 (not more than 0.2 for wheat and rice)
Root and tuber vegetables	Not more than 0.1	Not more than 0.1
Legume vegetables	Not more than 0.2	Not more than 0.1 (not more than 0.2 for soybean)
Fruits	Not more than 0.1 (not more than 0.2 for apples, citrus fruits and berries)	Not more than 0.05
Leafy vegetables (including brassica)	Not more than 0.3	Not more than 0.2
Leaf and stem vegetables	Not more than 0.1	Not more than 0.05
Root vegetables	Not more than 0.1 (not more than 2.0 for ginseng, wood-cultivated ginseng, balloonflower and bonnet bellflower)	Not more than 0.1 (not more than 0.05 for onion, not more than 0.2 for ginseng, wood-cultivated ginseng, balloonflower and bonnet bellflower)
Fruiting vegetables	Not more than 0.1 (not more than 0.2 for pepper and pumpkin)	Not more than 0.05 (not more than 0.1 for pepper and pumpkin)
Mushrooms	Not more than 0.3 (limited to cultivated mushroom, oyster mushroom, king oyster mushroom, oak mushroom, pine mushroom, winter mushroom and Tree Ear)	Not more than 0.3 (limited to cultivated mushroom, oyster mushroom, king oyster mushroom, oak mushroom, pine mushroom, winter mushroom and Tree Ear)
Sesame seed	Not more than 0.3	Not more than 0.2

(2) Maximum standard limits for heavy metals in animal products

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

* Poultry meat : Meats from chicken, duck, pheasant, goose, turkey, quail etc, which are the of muscular tissues of the animal's body including the attached fat and epidermis .

** Pork and beef meat : Muscular tissues of the animal's body (or parts chopped off from the body) including the attached fatty tissues such as fat and epidermis within the muscles.

(3) Maximum standard limits for heavy metals in fishery products

Products	Lead (mg/kg)	Cadmium (mg/kg)	Mercury (mg/kg)	Methyl mercury (mg/kg)
Fishes	Less than 0.5	Not more than 0.1 (For freshwater and pelagic fish) Not more than 0.2 (For marine fish)	Not more than 0.5 (except Abbysal fish, tunas and marlins)	Not more than 0.1 (for Abbysal fish, tunas and marlins)
Mollusks	Not more than 2.0 (not more than 2.0 for octopus with intestines)	Not more than 2.0 (not more than 3.0 for octopus with intestines)	Not more than 0.5	-
Crustaceans	Not more than 1.0 [not more than 2.0 for swimming crabs with intestines(swimming crabs in Family Portunidae)]	Not more than 1.0 [not more than 5.0 for swimming crabs with intestines(swimming crabs in Family Portunidae)]	-	-
Seaweeds	-	Not more than 0.3 [for seaweed(includes seasoned laver, apply based on	-	-

		living animal)]		

(4) Maximum standard limits for heavy metals in processed foods

Target food	Lead (mg/kg)	Arsenic (mg/kg)
Edible oils and fats	Not more than 0.1	Not more than 0.1
Infant food, follow-up food, cereal based food for infants and young children, other foods for infants and young children, food for special purposes for infants and young children, formula milk, follow-on formula, follow-on formula milk, other formula and other formula milk	Not more than 0.01 [For powder product, the standard is applied considering the consumption after dilution (intake method as the manufacturer suggested)]	-

(5) Maximum standard limits for dried agricultural, forestry, animal and fishery products

① If water content of the product has changed due to drying process, apply the limits considering the water content.

6) Standards for irradiated foods

Food irradiation technique is a radiation method of energy released from gamma ray and electron beam accelerators to irradiate food products for germination inhibition, sterilization, deinsectization and maturity control. It can be classified into gamma ray sterilization, electron beam sterilization, gamma ray deinsectization, gamma ray radiation, electron beam radiation, etc. according to radiation type, purpose of usage and treatment method (radiation) or classified by the collective name of radiation sterilization, radiation deinsectization, radiation irradiation, etc.

(1) The radiation types that may be used for food irradiation are gamma ray or electron beam.

(2) ^{60}Co may be used for the source of gamma ray and electron beam accelerator may be used for the source of electron beam.

(3) In the case of using gamma ray energy released from ^{60}Co, it may not exceed the absorbed dose limit specified for each of the products permitted for food irradiation treatment.

(4) In the case of using electron beam accelerator for food irradiation, irradiation should be done below 10 MeV and it may not exceed the absorbed dose limit specified for each of the products permitted for food irradiation treatment.

(5) Food irradiation may only be performed with the approved food materials and products which are hygienically handled and stored. Also, food irradiation technique may not be used for the purposes other than germination inhibition, sterilization, deinsectization and maturity control.

(6) The standard for irradiation treatment for each food product is as follows.

① Absorbed dose of the permitted food

Target food	Purpose of irradiation	Absorbed dose (kGy)
Potato, onion, garlic	Germination inhibition	Not more than 0.15
Chestnut	Deinsectization · germination inhibition	Not more than 0.25
Fresh mushrooms and dried mushrooms	Deinsectization · maturity control	Not more than 1
Egg powder	Sterilization	Not more than 5
Cereals, legumes and their powder	Sterilization · deinsectization	Not more than 5
Starch	Sterilization	Not more than 5
Dried meat	Sterilization	Not more than 7
Fish, shellfish and crustacean powder	Sterilization	Not more than 7
Soybean paste, Gochujang, Soy sauce powder	Sterilization	Not more than 7
Dried vegetables	Sterilization	Not more than 7
Yeast and enzyme foods	Sterilization	Not more than 7
Algae foods	Sterilization	Not more than 7
Aloe powder	Sterilization	Not more than 7
Ginseng (including red ginseng) products	Sterilization	Not more than 7
Dried spices and their products	Sterilization	Not more than 10
Composite seasonings	Sterilization	Not more than 10
Sauces	Sterilization	Not more than 10
Leached tea	Sterilization	Not more than 10
Powdered tea	Sterilization	Not more than 10
Foods for patients	Sterilization	Not more than 10

(7) Irradiated food shall not be re-irradiated and food, which is manufactured processed from irradiated raw materials, shall not be re-irradiated

7) Maximum radioactivity limits in foods

Nuclear type	Target food	Standard (Bq/kg, L)
^{131}I	Infant foods, follow-up foods, cereal foods for infants and young children, other foods for infants and young children, other foods for special purposes for infants and young children	Not more than 100
	Milk and milk products	Not more than 100
	Other foods*	Not more than 300
^{134}Cs + ^{137}Cs	All foods	Not more than 370

* Other products are all food products other than Infant foods, follow-up foods, cereal foods for infants and young children, other foods for infants and young children, foods for special purposes for infants and young children, milk and milk products.

8) Maximum limits for mycotoxins in foods

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

Target food	Standard (μg/kg)
Cereals, legumes, peanuts, nuts and their simple processed products (grinding, cutting, etc.)	Not more than 15.0 (Not more than 10.0 for B_1)
Cereal products and legume products (general processed foods outside the scope of 'Standards and Specifications')	
Soy sauces/pastes, red pepper powder and curry powder	
Nutmeg, turmeric, dried pepper, dried paprika and natural species containing these	
Wheat flour	
Dried fruits	
Infant foods, follow-up foods, cereal foods for infants and young children, other foods for infants and young children	(Not more than 10.0 for B_1)

(2) Aflatoxin M_1

Target food	Standard
Raw milk and milks before manufacturing processing	Not more than 0.5 μg /kg
Products containing milk components among milk formulas (formula, formula milk, follow-up formula, follow-up formula milk, other formula, other formula milk) and foods for special purposes (infants food, follow-up food, cereal foods for infants and young	Not more than 0.025 μg/kg [For powder product, the standard is applied considering the consumption after dilution (intake method as the manufacturer suggested)]

children, other foods for infants and young children, foods for special purposes for infants and young children)	

(3) Patulin

Target food	Standard (μg/kg)
Apple juice Apple juice concentrate (including concentrate to use as raw material and converted by concentration factor)	Not more than 50
Infant formula, Follow up formula, other food for infant and baby	Not more than 10.0

(4) Fumonisin

Target food	Standard (as sum of B_1 and B_2)
Corn	Not more than 4 mg/kg
Corn processed food (grinding, cutting, etc.)	Not more than 2 mg/kg
Processed cereal products and breakfast cereals containing at least 50% of simple processed corn and popcorn maize products	Not more than 1 mg/kg

(5) Ochratoxin A

Target food	Standard (μg/kg)
Cereal and its simple processed products (grinding, cutting, etc.)	Not more than 5.0
Coffee beans and roasted coffee	
Instant coffee	Not more than 10.0
Meju	Not more than 20
Red pepper powder	Not more than 7.0
Grape juice, Grape juice concentrate (including concentrate to use as raw material and converted by concentration multiple), wine	Not more than 2.0
Dried fruits	Not more than 10.0
Infant foods, follow-up foods, cereal foods for infant and young children, other foods for infants and young children	Not more than 0.50

(6) Deoxynivalenol

Target food	Standard limit (μg/kg)
Cereal and its simple processed products (grinding, cutting, etc.,	Not more than 1

except corn and simple processed corn)	
Corn and its simple processed products (grinding, cutting, etc.)	Not more than 2
Cereals	Not more than 0.5
Infant foods, follow-up foods, cereal foods for infant and young children, other foods for infants and young children	Not more than 0.2
Noodles	Not more than 0.75

(7) Zearalenone

Target food	Standard (μg/kg)
Cereal and its simple processed products (grinding, cutting, etc.)	Not more than 200
Confectionary	Not more than 50
Infant foods, follow-up foods, cereal foods for infant and young children, other foods for infants and young children	Not more than 20
Breakfast cereals	Not more than 50

9) Standards of shellfish poison

(1) Paralytic shellfish poisoning

Target food	Standard (mg/kg)
Shellfish	Not more than 0.8
Tunicates (Sea squirts, stalked sea squirts, wrinkled sea squirts, etc.)	

(2) Diarrhetic shellfish poisoning (sum of Okadaic acid and Dinophysistoxin-1)

Target food	Standard
Bivalves	Not more than 0.16 mg/kg

(3) Application of provisional standard of shellfish poisoning in dried fishery products

If water content of the product has changed due to drying process, apply the limits considering the water content.

10) Pesticide maximum residue limits in foods

(1) Application of maximum limits for pesticide residue

If maximum residue limits in agricultural products are not established in “Standards and specifications for foods”, the following requirements shall apply in consecutive order.

① The Codex standards shall be applied.

② The lowest residue limits of the agricultural products in concern among those listed in Annex 4 (The maximum residue limit of pesticide for agricultural products) and the agricultural products within the same large classification (for nuts and seeds, fruits and vegetables, small classification is applied preferentially) specified by 1, 3, 1) Plant-derived materials.

③ The lowest residue limits of the pesticide in concern among the maximum residue limits of pesticide for agricultural products listed in Annex 4.

(2) The maximum residue limits for pesticide in agricultural products.

① The maximum residue limits of pesticide in agricultural products are shown in Annex 4.

② Among the active ingredients contained in pesticide in use or registered under the「Pesticide Control Act」, the following ingredients are exempted from the establishment of maximum residue limits.

Number	Active ingredient
1	1 - Methylcyclopropene
2	Machine oil
3	Decylalcohol
4	*Monacrosporium thaumasium* KBC3017
5	*Bacillus subtilis* DBB1501
6	*Bacillus subtilis* CJ-9
7	*Bacillus subtilis* M 27
8	*Bacillus subtilis* MBI600
9	*Bacillus subtilis* Y1336
10	*Bacillus subtilis* EW42-1
11	*Bacillus subtilis* JKK238
12	*Bacillus subtilis* GB0365
13	*Bacillus subtilis* KB401
14	*Bacillus subtilis* KBC1010
15	*Bacillus subtilis* QST713
16	*Bacillus amyloliquefaciens* KBC1121
17	*Bacillus pumilus* QST2808
18	Bordeaux mixture
19	*Beauveria bassiana* GHA
20	*Beauveria bassiana* TBI-1
21	*Bacillus thuringiensis* subsp. aizawai
22	*Bacillus thuringiensis* subsp. aizawai NT0423
23	*Bacillus thuringiensis* subsp. aizawai GB413
24	*Bacillus thuringiensis* subsp. kurstaki

25	*Bacillus thuringiensis* var. kurstaki
26	Calcium polysulfide, lime sulfur
27	*Streptomyces goshikiensis* WYE324
28	*Streptomyces goshikiensis* WYE20
29	Spreader sticker
30	Polyethylene Methyl Siloxane
31	IBA, 4-indol-3ylbutyric acid
32	IAA, Indol-3-ylacetic acid
33	Sodium salt of alkylsulfonated alkylate
34	Alkyl aryl polyethoxylate
35	*Ampelomyces quisqualis* AQ94013
36	Oxyethylene methyl siloxane
37	Gibberellin A_3, Gibberellin A_{4+7}
38	Calcium carbonate
39	Copper sulfate basic
40	Copper sulfate tribasic
41	Copper oxychloride
42	Copper hydroxide
43	Trichoderma harzianum YC 459
44	*Penibacillus polymyxa* AC-1
45	*Paecilomyces fumosoroseus* DBB-2032
46	Polynaphthyl methane sulfonic acid dialkyl dimethyl ammonium (PMSAADA)
47	Polyether modified polysiloxane
48	Polyoxyethylene methyl Polysiloxane
49	Polyoxyethylene alkylarylether
50	Polyyoxyethylene fatty acid ester (PFAE)
51	Sulfur
52	Polynaphtyl methane sulfonic + polyoxyethylene fatty acid ester
53	Sodium lingo sulfonate
54	*Simplicillium lamellicola* BCP
55	*Trichoderma atroviride* SKT-1
56	Paraffin, Paraffinic oil
57	Pelargonic acid

(3) Maximum residue limits for pesticides in ginseng

Maximum residue limits for pesticides in ginseng are as follows in **[Annex 5]**.

(4) Maximum residue limits for pesticides in soybean and mung-bean sprouts

Carbendazime, Thiabendazole, Thiram, Captan and sulfur dioxide shall not be detected

(5) Provisional limits for residual agricultural chemicals in processed foods applied

For residual pesticide in processed food, if maximum residue limit is not established in "Standard and specification,' the following standards shall apply in consecutive order.

① Limits specified in CODEX shall apply first.

② Such residuals may be accepted if they are detected in the range of acceptable limits for food raw materials. In other words, the amount of raw materials will determine the limits for raw agricultural and livestock materials and, if the water content is changed during drying or other processes, the limits will be determined under consideration of water content. (Only, application of maximum pesticide residue limit in dried red pepper (including red pepper powder and shredded red pepper) is 7 times than that in red pepper, green tea extract 6 times than tea, dried ginseng and red ginseng 4 times than fresh ginseng, and ginseng concentrates and red ginseng concentrates 8 times than fresh ginseng)

(6) Applicable scope of limits for residual agricultural chemicals in livestock products

① Mammalian meat : Muscular tissues of animal body (or its part), including the fat in muscles and subcutaneous fat, obtained from cattle, pig, sheep, goat, rabbit, horse, deer, or others (except those from marine animals)

② Mammalian fat : Unprocessed fats from adipose tissues of cattle, pig, sheep, goat, rabbit, horse, deer, or others. The milk fat is not included in this definition.

③ Mammalian byproducts : Edible tissues and organs, except the meat and fats, from cattle, pig, sheep, horse, goat, rabbit, deer, or others, such as liver, lung, heart, stomach, pancreas, kidney, head, tail, foot, skin, blood, bone (bone containing tendon and tissues).

④ Poultry meat : Muscular tissues, including attached fat and skin, from poultry, such as rooster, pheasant, duck, goose, turkey, quail, or others.

⑤ Poultry fat : Unprocessed fats from adipose tissues of poultry, such as rooster, pheasant, duck, goose, turkey, quail, or others.

⑥ Poultry byproducts : Edible tissues and organs, except the meat and fats, from poultry, such as liver, heart, gizzard, skin, foot and other edible parts from rooster, pheasant, duck, goose, turkey, quail, etc.

⑦ Milk : Crude milk from mammals, such as sheep, goat, or others.

⑧ Dairy products : Milk, low-fat milk, lactose-hydrolyzed milk, processed milk, goat milk, fermented milk, butter milk, concentrated milk, milk cream, butter,

natural cheese, processed cheese, powdered milk, whey products, lactose, milk protein hydrolyzed foods, or others manufactured or processed with use of crude milk or other dairy products as main raw materials.

⑨ Eggs : Eggs from poultry, such as roosters, ducks, quails, or others, from which shell is removed.

(7) Limits for residual agricultural chemicals in animal products

The maximum residue limits of pesticide in animal products are shown in **[Annex 6]**.

11) Limits for Residual Veterinary Drugs

(1) Application of limits for residual veterinary drugs

① Any veterinary drugs (including their metabolites) of which manufacture or import is not authorized due to safety or efficacy problems shall not be detected. Some such veterinary drugs are summarized in the following table and others not included in this table may also be subjected to this provision in accordance with the applicable laws and regulations.

No.	Veterinary drugs that shall not be detected in foods[*1]
1	Nitrofurans and its derivatives[*2] (Furazolidone, Furaltadone, Nitrofurazone, Nitrofurantoine, Nitrovin, etc.) ◎ Residue definition : 3-amino-2-oxazolidinone (AOZ), 3-amino-5-morpholinomethyl- 2-oxazolidinone (AMOZ), Semicarbazide(SEM), 1-aminohydantoin(AHD), Nitrovin
2	Chloramphenicol ◎ Residue definition : Chloramphenicol
3	Malachite green and its derivatives ◎ Residue definition : Malachite green as the sum of Malachite green and Leucomalachite green
4	Diethylstilbestrol, DES ◎ Residue definition : Diethylstilbestrol
5	Dimetridazole ◎ Residue definition : Dimetridazole
6	Clenbuterol ◎ Residue definition : Clenbuterol
7	Vancomycin ◎ Residue definition : Vancomycin
8	Chlorpromazine ◎ Residue definition : Chlorpromazine
9	Thiouracil ◎ Residue definition : Thiouracil as the sum of 2-thiouracil, 6-methyl-2-thiouracil,

	6-propyl-2-thiouracil and 6-phenyl- 2-thiouracil
10	Colchicine ◎ Residue definition : Colchicine
11	Pyrimethamine ◎ Residue definition : Pyrimethamine
12	Medroxyprogesterone acetate, MPA ◎ Residue definition : Medroxyprogesterone acetate
13	Carbadox ◎ Residue definition : Quinoxaline-2- carboxylic acid (QCA)
14	Dapsone ◎ Residue definition : Dapsone as the sum of dapsone and monoacetyl dapson
15	Olaquindox ◎ Residue definition : 3-methyl quinoxaline- 2-carboxylic acid (MQCA)
16	Ronadazole ◎ Residue definition : Ronidazole
17	Metronidazole ◎ Residue definition : Metronidazole

*1. This applies to livestock products, fishery products of animal origin, and their processed products only.

*2. Semicarbazide (SEM), the metabolite of nitrofurazone, only applies to edible portion of non-heated livestock products and fishery products of animal origin (including the simple cut).

② If limits for residual veterinary drugs in food for byproducts of edible animals (edible parts containing the internal organs, bones, head, tail, foot, skin, and blood) are not specified in foods listed in [Annex 7], the limits applicable to “muscle (meat)” for livestock products and “fish” for marine products shall be applied.

③ For food products manufactured or processed using the raw materials for which limits for residual substances are established, such residuals may be accepted if they are detected in the range of acceptable limits for those raw materials. In other words, the limits for residues in individual raw materials will be based on the amount of raw materials and, if the water content is changed during drying or other processes, the limits will be determined under consideration of water content.

④ In case of royal jelly and propolis, standards for honey shall be applied.

⑤ If residual limits in edible animals are not specified in this notification, the following standards can be sequentially applied.

Ⓐ The Codex standards

Ⓑ Application of the lowest residue limits in the area of the similar edible animals. In other words, if the standard is not established in ruminant mammals, non-ruminant mammals, poultry, fish, and crustacean, the lowest residue limits in the area of ruminant mammals, non-ruminant mammals, poultry, fish and crustacean shall be applied (only, horse, non-ruminant, shall follow the standard for ruminant)

Ⓒ The residual limit of antibacterial agents in livestock and marine products (including milk and eggs) and honey (including royal jelly and propolis) shall be limited to 0.03 mg/kg.

(2) Limits for residual veterinary drugs in foods are summarized in **[Annex 7].**

(3) Exemption from maximum residue limits for veterinary drugs in food

The substances which clearly do not pose risk in human body and substances which are exempted from the data related to residues as specified in Regulations on Safety and Effectiveness Evaluation of Veterinary Drugs, etc. (Animal and Plant Quarantine Agency Notification) are exempted from the maximum residue limits. Provided, maximum residue limits can be established when deemed necessary by the Commissioner of the Ministry of Food and Drug Safety.

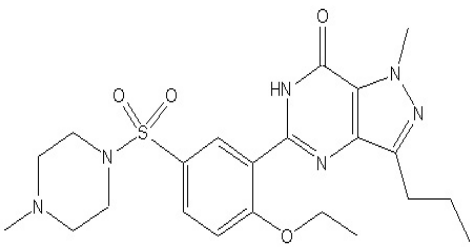
12) Specifications of substances similar to anti-impotence drugs and such.

(1) Synthetic substances whose chemical structures are fundamentally similar to those of the following anti-impotence drugs, anti-diabetics drugs or anti-obesity drugs shall not be detected. (Except for those for which standards and specifications are established.)

Ⓐ Anti-impotence drugs

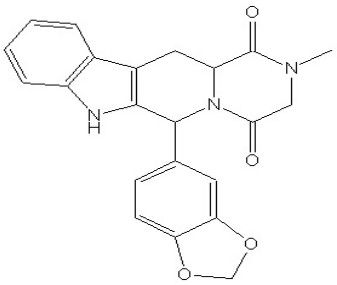
a. Sildenafil

($C_{22}H_{30}N_6O_4S$, 474)



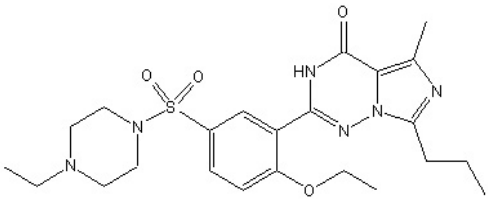
b. Tadalafil

($C_{22}H_{19}N_3O_4$, 389)



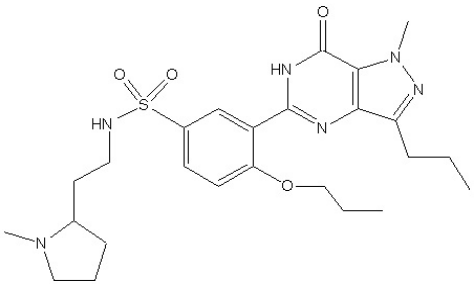
c. Vardenafil

($C_{23}H_{32}N_6O_4S$, 488)



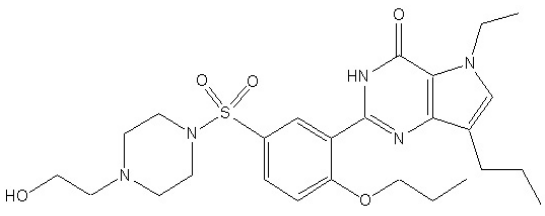
d. Udenafil

($C_{25}H_{36}N_6O_4S$, 516)



e. Mirodenafil

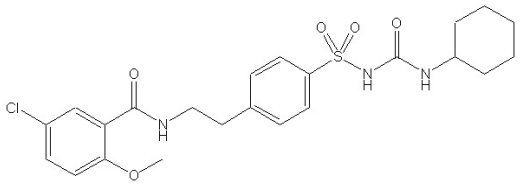
($C_{26}H_{37}N_5O_5S$, 531)



Ⓑ Antidiabetics drugs

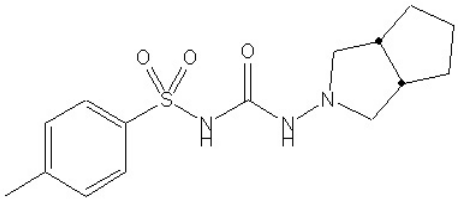
a. Glibenclamide

($C_{23}H_{28}ClN_3O_5S$, 493)



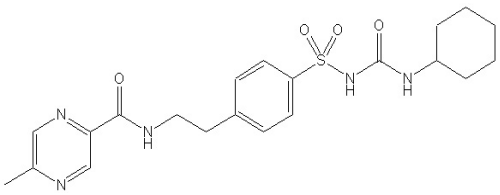
b. Gliclazide

($C_{15}H_{21}N_3O_3S$, 323)



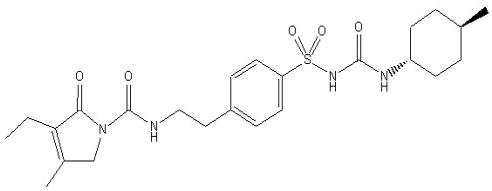
c. Glipzide

($C_{21}H_{27}N_5O_4S$, 445)



d. Glimepiride

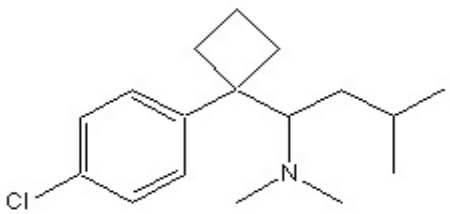
($C_{24}H_{34}N_4O_5S$, 490)



Ⓒ Anti-obesity drug

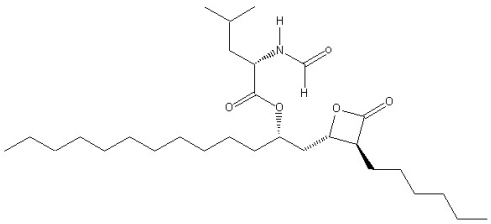
a. Sibutramine

($C_{17}H_{26}ClN$, 279)



b. Orlistat

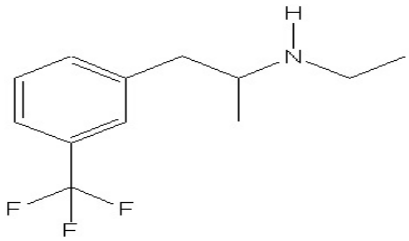
($C_{29}H_{53}NO_5$, 495)



Ⓓ Others

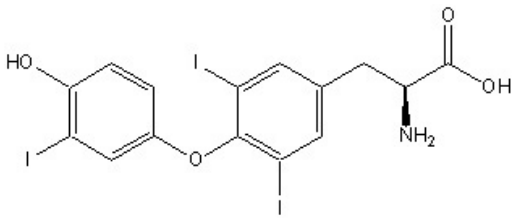
a. Fenfluramine

($C_{12}H_{16}F_3N$, 231)



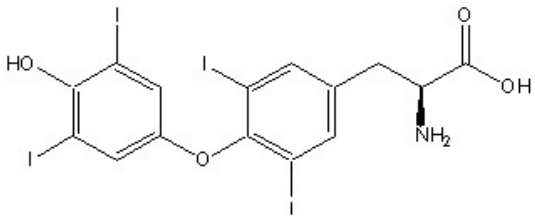
b. Liothyronine

($C_{15}H_{12}I_3NO_4$, 651)



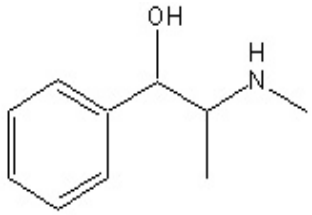
c. Levothyroxine

($C_{15}H_{11}I_4NO_4$, 777)



d. Ephedrine

($C_{10}H_{15}NO$, 165)



(2) Analogues of anti-impotence drug

① Homosildenafil : shall not be detected

② Hongdenafil : shall not be detected

③ Hydroxy homosildenafil : shall not be detected

④ Amino tadalafil : shall not be detected

⑤ Pseudo-vardenafil : shall not be detected

⑥ hydroxyl hongdenafil : shall not be detected

⑦ Dimethylsildenafil : shall not be detected

⑧ Xanthoanthrafil : shall not be detected

⑨ Hydroxy vadenafil : shall not be detected

⑩ Norneosildenafil : shall not be detected

⑪ Demethylhongdenafil : shall not be detected

⑫ Piperidinohongdenafil : shall not be detected

⑬ Carbodenafil : shall not be detected

⑭ Thiosildenafil : shall not be detected

⑮ Dimethylthiosildenafil : shall not be detected

⑯ Acetylvardenafil : shall not be detected

⑰ Benzylsildenafil : shall not be detected

⑱ Norneovardenafil : shall not be detected

⑲ Oxohongdenafil : shall not be detected

⑳ Thiohomosildenafil : shall not be detected

㉑ Desulfovardenafil : shall not be detected

㉒ Nitrodenafil : shall not be detected

㉓ Cyclopentynafil : shall not be detected

㉔ Octylnortadalafil : shall not be detected

㉕ Chlorodenafil : shall not be detected

㉖ Cinnamyldenafil : shall not be detected

㉗ Thioquinapiperifil : shall not be detected

㉘ Hydroxythiohomosildenafil : shall not be detected

㉙ Chloropretadalafil : shall not be detected

㉚ Hydroxychlorodenafil : shall not be detected

㉛ Dichlorodenafil : shall not be detected

(3) Analogues of anti-obesity drugs

① Desmethylsibutramine : shall not be detected

② Didesmethylsibutramine : shall not be detected

13) Benzo(a)pyrene

① Edible oils and fats : Not more than 2.0 μg/kg

② Sukjihwang and gunjihwang (Rehmannia glutinosa) : Not more than 5.0 μg/kg

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

④ Smoked dried fish : Not more than 10.0 μg/kg [apply as living things (water content should be considered if it has changed due to drying) and in the case of using smoked dried fish as a raw material for the products processed through water extraction, this standard may not be applied. However, benzo(a)pyrene shall not be detected from the extract from the water extraction]

⑤ Fish : Not more than 2.0 μg/kg

⑥ Shellfish : Not more than 10.0 μg/kg

⑦ Mollusks (excluding shellfish) : Not more than 5.0 μg/kg

⑧ Formula, follow-up formula, other formula, foods for special purposes (foods for infants, follow-up foods, cereal foods for infants and young children, other foods for infants and young children, specially prepared foods for infants and young children) : Not more than 1.0 μg/kg.

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

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

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

14) Standard of 3-MCPD (3-Monochloropropane-1,2-diol)

(Unit : mg/kg)

Food products	Standard
Acid hydrolyzed soy sauce, mixed soy sauce (limited to those manufactured by mixing and processing of acid hydrolyzed soy sauce or its undiluted solution)	Not more than 0.3
HVP: Hydrolyzed vegetable protein	Not more than 1.0 (as of dried HVP)

* Hydrolyzed vegetable protein (HVP) : obtained by hydrolyzing vegetable proteins from pulses, corns or wheat into amino acids, etc. through chemical processing such acid hydrolysis (excluding enzyme hydrolysis).

15) Standard of Melamine

Food products	Standard limit
○ Infant formula, follow-up formula, cereal based food for infant and young children, other foods for infant and young children and food for special medical purpose among foods for special purposes ○ Formulated milk powder, formulated milk, follow- up formulated milk, other formulate milk powder and other formulated milk according to 「Processing Standards and Component Specifications of Livestock Products」	Not detected
○ All other foods and food additives except the foods specified above	Not more than 2.5 mg/kg

16) For food products manufactured and marketed for infants and young children under 6 months of age, tar color shall not be detected and the following microbiological standards and specifications are applied at the same time.

(1) Bacterial count : n=5, c=2, m=1,000, M=10,000 (for liquid products, n=5, c=1, m=10, M=100)

(2) Coliform group : n=5, c=0, m=0

(3) *Enterobacter saskazakii* (*Cronobacter* spp.) : n=5, c=0, m=0

17) Maximum levels for Dioxin in Meats

(1) Beef : Not more Less 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

18) Standard limits for Norovirus in food service businesses

For water used in cooking, manufacturing, or processing of food, or drinking, or cleaning of food materials or tableware at restaurant, food service centers, or food manufacturers or processors, norovirus shall not be detected. However, the city water to be used as drinking water at the restaurant, food service centers or others shall be exempted.

19) Microorganism standards of vending machine food for teas, coffees, beverages (Except sealed products)

(1) Bacterial count : Not more than 3,000/mL (Except dairy products, lactic acid bacteria products, fermented products and non-heated beverages containing fruits and vegetables).

(2) *Escherichia coli* : shall be negative

20) Standard for Polychlorinated biphenyl (PCBs) in fishery products

(1) Fish : Not more than 0.3 mg/kg

21) Standard of contaminants such as heavy metal, mycotoxin and shellfish-toxin for processed food can be applied within the range of standard for raw materials. That is, the standard for agricultural, animal, fishery products should be applied based on the content of raw materials and the water content should be considered if it is changed due to the drying process.

22) Standard for histamine in fishery products

(1) Frozen fish, salted fish, canned products, products which are simple processed such as drying/cutting (fish flesh, fillet, dried anchovy, etc.) : Not more than 200 mg/kg (limited to mackerel, tuna, salmon, pacific saury, herring, anchovy, Japanese Spanish mackerel, sardine and bullet tuna)

23) Standard for THC(δ -9-Tetrahydrocnnabinol)

① Hemp(*Cannabis sativa* L.) seed : Not more than 5 mg/kg

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

6. Preservation and Distribution Standards

1) All foods are hygienically dealt to sell, and their storage & store shall not be located in an unclean place. Rat and insect-proof management shall be thoroughly performed.
2) Food handling place shall be protected from rain, snow, and chemical product, agricultural chemicals and poison, which are harmful to human, shall not be kept at the same place.
3) A caution has to be taken so that foreign materials are not contaminated in the product and food shall be separated from other foods and food additives that may affect the products taste and from commodities that may contaminate or affect the quality of foods.
4) Food shall be kept and distributed at a cool place and some foods, of which storage cannot be continued for 7 days at ordinary temperature, shall be kept and distributed at the refrigeration or freezing facility as long as possible.
5) The storage and distribution of soybean flour, which is used as raw material for food manufacturing, should be prevented from the contamination of various hazardous materials, impurities and foreign materials (including mold, etc.) and should be appropriately managed. Also, Soybean flour should not be exposed to direct sun light, rain, etc.
6) Lunch box is supplied as soon as possible and shall be transported and distributed in a temperature-controlled facility in order to control chilling, warming, room temperature and constant temperature. Chilling should be maintained at no more than 10˚C and warming at no less than 60˚C.
7) Processed fish meat products (except the sterilized products after put into airtight containers or packages), pasteurized soybean milk (except the pasteurized products with pH below 4.5), seasoned jeotkal, sikhae and processed bean curd (except the sterilized products after put into air-tight containers or packages) shall be kept at no more than 10˚C, while fresh ready-to-eat food and smoked salmon shall be kept at no more than 5˚C. Additionally, if possible, bean curds,

whole bean curds and starch jellies should be chilled or stored while being treated with water which meets the standards for drinking water.

8) Frozen products shall not be thawed and distributed as room-temperature or chilled products and room-temperature and chilled products shall not be distributed as frozen products. Also, in the case of manufacturer thawing the frozen products of breads, rice cakes, chocolates and salted and fermented seafood (jeotkal) after labeling the completion date of frozen packaging, the thawing date, sell-by-date in the distribution condition from the thawing date (within the sell-by-date as frozen products) is excluded.

9) Frozen fishery products can be distributed within the 24 hours after thawing. In this case, thawed fishery products shall not be frozen again.

10) Chilled food shall not be distributed at room temperature (except fruits and vegetables).

11) Thawed frozen products shall not be frozen again. However, thawing to remove inedible parts such as intestines for frozen fishery products may be exempted and in this case, the fishery products shall be frozen quickly.

12) Transportation of frozen or chilled products shall be performed with use of a vehicle which is able to maintain the appropriate temperature or with the equivalent or better method. For long distance transport of bean curd, whole bean curd and starch jellies for more than 4 hours, a cold-storage vehicle shall be used to maintain the quality of the products. For processed bean curd, a cold-storage vehicle shall be used to maintain the quality of the products.

13) For products with a concern for moisture absorption, a caution should be taken to avoid the moisture absorption.

14) A caution should be taken not to damage the container/packaging during transportation of products and products should not be severely impacted. Also, tube products should be stored so they do not become rusty on the outer surface.

15) Other print shall not be affixed to the labeling of manufacturing date or sell-by date.

16) “Sell-by date” is calculated from the completion time of packaging (the completion time of final manufacturing processing for the products which are subjected to manufacturing process after packaging) and sell by date of capsule products is calculated from the completion time of filling and formation process. When various products with different sell-by dates are packaged

together such as gift sets, the shortest sell-by date shall be the sell-by date of the set products. However, the sell-by date of division-selling product is calculated from the packaging time of raw material and the sell-by date of simple processed products, in which the preservation of raw material is not changed, is calculated from the packaging time of the raw material. Additionally, for frozen products of breads, rice cakes, chocolates and salted and fermented seafood (jeotkal) which are distributed after thawing, the sell-by date for the distribution condition from the thawing date is calculated from the thawing time.

17) Sell-by date is established by the manufacturer (as for imported products, the importer can set the sell-by date within the sell-by date set up by the manufacturer) to ensure the risk prevention and product quality after considering the product characteristics, such as packaging material, preservation conditions, manufacturing method and the maxing ratio of raw materials, and distribution conditions such as refrigeration or freezing storage.

18) If a vessel is used to import, store, hold or transport the concentrated fruit juice and others, the storage tank (no more than -5˚C), in-house storage tank (no more than 0˚C), and tank lorry for transport (no more than 0˚C) shall maintain the specified temperatures and the transfer line must be cleaned. Materials and cleaning agents used for cleaning of storage, holding, transport and transfer line of products shall meet the standards and specification for food additives, utensils, containers or packaging materials.

19) Fish frozen in saline to be used in the manufacture of canned food may be transported at -9˚C or less and sanitary transport containers and covers should be used during transportation to maintain the temperature no more than -9˚C.

20) Ices shall be stored and distributed at no more than -10˚C.

Article 3. Standards and Specifications for Long Shelf-life Foods

Article 3. Standards and Specifications for Long Shelf-life Foods

1. Canned and Bottled Foods

"Canned and bottled food" is a product which is degassed, sealed and pasteurized or sterilized after the food content is filled into a can or a bottle.

1) Manufacturing and processing standards

(1) Sterilization shall be thermally processed in a way that the central temperature of product is 120˚C for 4 minutes or in an equivalent or more effective way.

(2) Low acid food, of which pH is above 4.6, is marked by a label that indicates the product's contents, processing place and processing date, and the record about sterilization treatment shall be kept in documentation

(3) Acidic food, of which pH is 4.6 or less, may be pasteurized through a heat treatment, etc.

(4) In order to keep the preservability, product shall be pasteurized or sterilized by an appropriate method according to its characteristics and then chilled by a proper method in order to prevent product contents from being discolored and restrain thermophillic bacteria from being proliferated.

2) Specifications

(1) Appearance : The container or closure shall not be swelled or deformed. The contents should have its own unique color and should not have off-flavor or off-taste.

(2) Tin (mg/kg) : Not more than 150 (Applies to all canned products except aluminum can products. However, not more than 200 for acidic canned food)

(3) Bacteria : Shall be negative for bacterial growth

2. Retort Foods

"Retort food" is a product which is sealed, heat pasteurization or sterilization after filling the manufactured, processed or cooked food in to a pouch or a molded container made by a single-layer plastic film, metal foil or by gluing these layers together.

1) Manufacturing and processing standards

(1) Sterilization shall be thermally processed in a way that the central temperature of product is 120˚C for 4 minutes or in an equivalent or more effective way. Low acid food, of which pH is above 4.6, is marked by a label that indicates the product's contents, processing place and processing date, and the record about sterilization treatment shall be kept in documentation. Acidic food, of which pH is 4.6 or less, may be pasteurized through a heating treatment, etc.

(2) Products shall by pasteurized or sterilized by an appropriate method according to the characteristics of the products to maintain the preservability. Also, the products shall be chilled with an appropriate method to prevent the content from being discolored and restrain thermophillic bacteria from being proliferated.

(3) Preservatives shall not be used for any purpose.

2) Specifications

(1) Appearance : The product shall not be swelled or deformed. The contents should have their own unique taste, color, and physical properties and should not have off-flavor or off-taste.

(2) Bacteria : Shall be negative for bacterial growth

(3) Tar color : Shall not be detected

3. Frozen Foods

"Frozen food" refers to a food made by filling the manufactured, processed or cooked food into a container and packaging materials after freezing treatment for the purpose of long-term storage.

(1) Frozen food not requiring heating process before consumption : Frozen food that can be consumed without any separate heating process.

(2) Frozen food requiring heating process before consumption : Frozen food that can be consumed only after a separate heating process.

1) Manufacturing and processing standards

(1) Pasteurized product shall be thermally processed in a way that the central temperature of product is 63˚C for 30 minutes or in an equivalent or more effective way.

2) Specifications

(1) Frozen food not requiring heating process before consumption

① Bacterial count : n=5, c=2, m=100,000, M=500,000 (Except fermented products and products containing fermented products or lactic acid bacteria)

② Coliform group : n=5, C=2, m=10, M=100

③ Lactic acid bacterial count : Not less than labeled count (only applies to products containing lactic acid bacteria)

(2) Frozen food requiring heating process before consumption

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. However, fermented products and products containing fermented products or lactic acid bacteria are excluded)

② Coliform group : n=5, c=2, m=0, M=100 (Only applies to pasteurized products)

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

④ Lactic acid bacterial count : Not less the labeled count (only applies to products containing lactic acid bacteria)

Article 4. Standards and Specifications for General Processed Foods Outside the Scope of ‘Standards and Specifications for Each Food Product’

Article 4. Standards and Specifications for General Processed Foods Outside the Scope of ‘Standards and Specifications for Each Food Product’

General processed food other than those stated in 'Article 5. Standards and Specifications for Each Food Product' can be generally classified as follows. However, the food whose definition, manufacturing and processing standard, main raw material, appearance, product name & usage etc. come under 'Article 5. Standards and Specifications for Each Food Product' and which is incongruent to its individual Standards and Specifications shall be excluded

1. Food Type

1) Processed cereal products : Refer to the products processed with cereal as main material.

2) Processed bean products : Refer to the products processed with legumes as main material.

3) Processed potato products : Refer to the products of processed with potatoes as main material.

4) Processed starch products : Refer to the products processed with starch as main material.

5) Processed edible oil and fat products : Refer to the products processed with edible oil and fat (however, pressed sesame oil or perilla oil is excluded) as main material.

6) Processed sugar products : Refer to the products processed with sugar as main material.

7) Processed marine products : Refer to the products processed with fishery products as main material

8) Other processed products : Refer to processed foods, which is not included in 1) ~ 7) above.

2. Specifications

1) Appearance : Shall be suitable.

2) Foreign material: Shall be suitable.

3) Acid value

(1) Edible oil and fat processed food : Not more than 3.0

(2) Sesame powder and soy powder : Not more than 4.0

(3) Edible processed pupa or oil-treated/fried food : Not more than 5.0

4) Peroxide value : Not more than 60 (Limited to edible processed pupa or oil-treated/fried food)

5) Heavy metals (mg/kg) : Not more than 10 (Limited to processed edible oil and fat products or processed sugar products)

6) Coliform-group : Shall be negative (Limited to pasteurized products)

7) Bacterial count : Shall be negative (Limited to pasteurized products)

8) Tar color, synthetic preservatives, and antioxidants shall be tested for products only if such usage standard are established in the Food Additives Code. This test item may be selectively applied depending on the importance.

Article 5. Standards and Specifications for Each Food Product

Article 5. Standards and Specifications for Each Food Product

1. Confectioneries

1) Definition

Confectioneries refer to confectioneries, candies, chewing gum, ice candies, etc. that are processed by the addition of other foods or additives using vegetable raw material as its main material.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Ice candies shall be frozen after pasteurization with heat treatment at no less than 63˚C (central temperature) for 30 minutes or with an equivalent or more effective way.

(2) For the size of jelly in cup form, the inner diameter of the surface in contact with the closure shall not be less than 5.5 cm and the height and the inner diameter of the bottom shall not be less than 3.5 cm.

(3) The following gelling agents shall not be used as raw materials for the manufacture of jelly products (cup shaped, etc.)

① Konjack, glucomannan

4) Food Types

(1) Confectionery

Confectionery refers to a product that made using the vegetable materials, such as grain powders, baking, swelling, frying, or other processes, or adding a food or food additive and includes the biscuit, wafer, cookie, cracker, Han-Gwa (Korean traditional cookies), etc.

(2) Candy

Candy refers to a product using vegetable materials, sugars, sugar alcohols and red bean precipitant as main base materials, which is concentrated and formulated by mixing with other foods or food additives to manufacture candy, caramel, Yang-Gang (Red bean jelly), jelly, etc.

(3) Chewing gum

Chewing gum refers to a product that uses natural or artificial resin as its base materials, which is processed by mixing with other foods or food additives.

(4) Ice candy

Ice candy refers to a product made by adding other foods or food additives into drinking water and mixing and freezing it and does not include the ice creams as specified in the Standards and Specifications for Livestock Products.

5) Specifications

(1) Appearance : Shall have its own unique flavor without off-flavor or off-taste

(2) Acid value : Not more than 2.0 (Limited to oil-fried or oil-treated food and not more than 3.0 for oil-and-honey pastry)

(3) Unpermitted tar color : Shall not be detected (Limited to candies and chewing gums)

(4) Unpermitted artificial sweetener : Shall not be detected (Limited to candies)

(5) Antioxidants (g/kg) : Shall not be detected except those specified in the followings. (Limited to chewing gum)

Butylated Hydroxy Anisole Butylated Hydroxy Toluene Tert-Butylhydroquinone	Not more than 0.4 g/kg (when used in combination, total amount of butylated hydroxy anisole, butylated hydroxy toluene, and tert-butylhydroquinone should not be more than 0.4 g/kg).

(6) Bacterial count

① Confectioneries, candies : Not more than 10,000 per 1 g of sample (Limited to sealed food and except fermented foods and products containing lactic acid bacteria)

② Ice candy : Not more than 3,000 per 1 mL of sample solution (Except ice candies containing lactic acid bacteria).

(7) Coliform group : Not more than 10 per 1 mL (Limited to ice candy)

(8) Lactic acid bacterial count : Not less than the labeled count (Limited to confectioneries, candies and ice candies containing lactic acid bacteria)

(9) Fracturability (Newton) : Not exceeding 5 (Limited to cup-shaped jelly)

(10) Total aflatoxin (μg/kg) : Not more than 15.0 (As the sum of B_1, B_2, G_1 and G_2. However, B_1 shall not be more than 10 μg/kg for peanuts and nut-containing products)

(11) Fumonisin (mg/kg) : Not more than 1 (As the sum of B_1 and B_2. However, limited to products containing 50% or more corn)

(12) Lead (mg/kg) : Not more than 1.0 (Limited to jellies)
Not more than 0.2 (Limited to candies)

6) Test methods

(1) Acid value

Take an appropriate amount of sample into an Erlenmeyer flask. The sample amount should be appropriate for obtaining the necessary amount of the milk fat after grinding or cutting. Then, add purified ether and make certain that the sample is soaked in ether. While shaking it from time to time, allow it to stand for about 2 hours. Filter it through a dry filter paper in a way that prevents the outflow of solids, add the purified ether (half amount) into the sample in the flask, mix it, and repeat the filtration through the same filter. Transfer the filtrate to a separatory funnel, add water in the amount equivalent to about 1/2~1/3 of the filtrate, mix it, and discard the water layer. Repeat this procedure twice. Collect the ether layer and dehydrate it with sodium sulfate anhydride, pass it through nitrogen or carbon dioxide gas, and conduct the pressure reduction in water bath at 40˚C to completely remove ether. Take about 10 g of the remnant and analyze it according to 11.5.3.1 Acid Value, 1. Food Component Test Methods in Article 9. General Testing Methods. "S" in the formula means the amount (g) of milk fat.

(2) Unpermitted tar color

It shall be tested according to 2.4. Coloring Agents in Article 9. General Testing Methods.

(3) Unpermitted artificial sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(4) Antioxidants

It shall be tested according to 2.3 Antioxidants in Article 9. General Testing Methods.

(5) Bacterial count

Dissolve the sample completely at below 40˚C for a short period and take 10 mL into a bottle. Add a sterilized phosphate buffer or sterilized physiological saline to make the final volume of

100 mL. Use this solution as the test solution and analyze it according to 3.5.1 General Bacterial count, 3. Microbiological Methods in Article 9. General Testing Methods.

(6) Coliform group

Analyze the sample solution prepared at the above method for bacterial count according to 다. Desoxycholate Lactose Agar Method, 3.7.2 Quantitative Methods, 3.7 Coliform group Methods in Article 9. General Testing Methods.

(7) Lactic acid bacterial count

It shall be tested according to 3.9 Lactic Acid Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(8) Fracturability

It shall be tested according to 9.5. Physical Testing of Jelly in Article 9. General Testing Methods.

(9) Aflatoxin

It shall be tested according to 6.1. Mycotoxin in Article 9. General Testing Methods.

(10) Fumonisin

It shall be tested according to 6.1. Mycotoxin in Article 9. General Testing Methods.

(11) Lead

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

2. Breads or Rice Cakes

1) Definition

Breads or rice cakes refer to breads, rice cakes, and dumplings made by using the wheat flour, rice flour, glutinous rice flour, potato flour or starch or other grain flour as main material, adding other foods or food additives, and processing them according to manufacturing characteristics.

2) Requirements of Raw Material

(1) Raw material that may be easily spoiled or deteriorated shall be stored at freezing or cold temperature.

3) Manufacturing and Processing Standards

(1) For alcohol-treated products (with no less than 1% alcohol), the quality of the product shall not be deteriorated by residual alcohol.

4) Food Types

(1) Bread

Bread refers to a bread, cake, sponge cake, doughnut, pizza, pie, hot dog, or others made by using the wheat flour or other grain flour as main material, adding other foods or food additives, and kneading it with or without fermentation or cooked afterwards.

(2) Rice Cake

Rice cake refers to food made by kneading the dough or cooking it after combining rice flour, glutinous rice flour, potato flour or starch or other grain flour as a main ingredient with salt, sugars, grains legumes, vegetables, fruits, alcohols, etc.

(3) Dumpling

Dumpling refers to food made by molding the mixture of meat, vegetables, and/or others with dumpling sheets.

5) Specifications

(1) Appearance : Shall have unique flavor without off-flavor or off-taste

(2) Tar color : Shall not be detected (Limited to loaf bread and sponge cake)

(3) Sodium saccharin : Shall not be detected

(4) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Propionic acid Sodium propionate Calcium propionate	Not more than 2.5 (as propionic acid, limited to breads)
Sorbic acid Potassium sorbate Calcium sorbate	Not more than 1.0 (as sorbic acid, limited to red bean paste, etc.)

(5) *Staphylococcus aureus* : Shall be negative (Limited to products spread or filled with cream)

(6) *Salmonella* ssp. : Shall be negative n=5, c=0, m=0/10g (Limited to products spread or filled with cream)

(7) *Escherichia coli* : Shall be negative (limited to rice cakes)

6) Test methods

(1) Tar color

It shall be tested according to 2.4. Coloring Agents in Article 9. General Testing Methods.

(2) Artificial Sweetener

It shall be tested according to 2.2.1 Sodium Saccharin Article 9. General Testing Methods.

(3) Preservatives

It shall be tested according to 2.1. Preservatives in Article 9. General Testing Methods.

(4) *Staphylococcus aureus*

10 g of cream from products spread or filled with cream is randomly taken, and homogenized with 90 mL of sterilized saline solution. The homogenized solution is tested according to 3.12.1 Qualitative Methods, 3.12 *Staphylococcus aureus* in Article 9. General Testing Methods.

(5) *Salmonella* ssp.

The cream from food products spread or filled with cream is used as a sample and tests are performed according to 3.11 *Salmonella* spp. described in Article 9. General Testing Methods.

3. Cocoa Products or Chocolates

1) Definition

Cocoa products or chocolates refer to cocoa mass, cocoa butter, cocoa powder, or others that obtained from the fruits of *Theobroma cacao* or the chocolate, sweet chocolate, milk chocolate, family milk chocolate, white chocolate, semi-chocolate and processed chocolate products made by adding foods or food additives to such cocoa mass, cocoa butter, cocoa powder or others.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Alcoholic components should not be added. However, if it is intended that the alcoholic components will be used for the purposes of improving the taste, supplementing the scent, or removing the odor, the alcoholic component may be used at less than 1% (as of alcohol).

4) Food Types

(1) Processed Cocoa Products

① Cocoa mass

Cocoa product produced by roasting, peeling and crushing cacao fruits.

② Cocoa butter

Fat obtained by peeling cacao fruits and extracting or pressing them.

③ Cocoa powder

Powdered cocoa product obtained by roasting, peeling, pressing cacao fruits and defatted them.

④ Other processed cocoa products

Other cocoa products processed by mixing the raw materials obtained from cacao fruits with foods or food additives excluding the above cocoa mass, cocoa butter and cocoa powder.

(2) Chocolates

① Chocolate

Chocolate is manufactured by adding foods or food additives to cocoa components and processing them and contains no less than 35% of cocoa solids (No less than 18% of cocoa butter and no less than 14% of fat-free cocoa solids).

② Sweet chocolate

Sweet chocolate is manufactured by adding foods or food additives to cocoa components and contains no less than 30% of cocoa solids (No less than 18% of cocoa butter and no less than 12% of fat-free cocoa solids).

③ Milk chocolate

Milk chocolate is manufactured by adding foods or food additives to cocoa components and contains no less than 25% of cocoa solids (No less than 2.5% of fat-free cocoa solids) and no less than 12% of milk solids (No less than 2.5% of milk fat).

④ Family milk chocolate

Family milk chocolate is manufactured by adding foods or food additives to cocoa components and contains no less than 20% of cocoa solids (No less than 2.5% of fat-free cocoa solids) and no less than 20% of milk solids (No less than 5% of milk fat).

⑤ White chocolate

White chocolate is manufactured by adding foods or food additives to cocoa components and contains no less than 20% of cocoa butter and no less than 14% of milk solids (No less than 2.5% of milk fat).

⑥ Semi-chocolate

Semi-chocolate is manufactured by adding foods or food additives to cocoa solids and contains no less than 7% of cocoa solids.

⑦ Processed chocolate product

Processed chocolate product is manufactured by adding various chocolate products of the above ①~⑥ to nuts, candies, biscuits, or other foods and mixing, coating, or filling them.

5) Specifications

(1) Appearance : Shall have its own unique flavor without off-flavor or off-taste

(2) Lead (mg/kg) : Not more than 2.0 (Limited to cocoa powder)

(3) Iodine value : 33~42 (Limited to cocoa butter)

(4) Unpermitted Tar color : Shall not be detected (Except cocoa mass, cocoa butter, and cocoa powder).

(5) Bacterial count : Not more than 10,000 per 1g of sample (Limited to sealed chocolates and except fermented products or products-containing lactic acid bacteria)

(6) Lactic acid bacterial count : Not less than the labeled count (Limited to chocolates containing lactic acid bacteria)

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

6) Test Methods

(1) Lead

It shall be tested according to 7.1 Methods for Heavy Metals in 9. General Testing Methods.

(2) Iodine value

It shall be tested according to 1.1.5.3.3 Iodine value, 1. Food component Methods in Article 9. General Testing Methods.

(3) Unpermitted Tar color

It shall be tested according to 2.4. Coloring Agents in Article 9. General Testing Methods.

(4) Bacterial count

It shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Lactic acid bacterial count

It shall be tested according to 3.9 Lactic Acid Bacteria Count, 3. Microbiological methods in Article 9. General Testing Methods.

(6) *Salmonella* ssp.

It shall be tested according to 3.11 *Salmonella* ssp., 3. Microbiological Methods in Article 9. General testing methods.

4. Jams

1) Definition

Jams refer to products made into jellies or syrup that are manufactured by mixing fruits or vegetables with sugars, such as jam, marmalade, etc.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) After pasteurization process, the products should be cooled down to maintain the quality and inhibit the growth of thermophilic bacteria.

4) Food Types

(1) Jam

Jam refers to a product manufactured by jellifying fruits or vegetables (not less than 40% as fresh-weight; not less than 30% in case of berries except strawberry) together with sugars.

(2) Marmalade

Marmalade refers to a product manufactured by using citrus fruits (not less than 30%) and includes the rind of the citrus fruits.

(3) Other Jams

Other jams refer to products manufactured by processing fruits or vegetables or the mixture of fruits or vegetables and sugars, such as syrup (not less than 30% as fresh-weight), jelly (not less than 20% as fresh-weight), fruit pie filling, etc.

5) Specifications

(1) Tar color : Shall not be detected (Except other jams)

(2) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic acid Potassium sorbate Calcium sorbate	Not less than 1.0 (as sorbic acid)
Benzoic acid Sodium benzoic acid	Not less than 1.0 (as benzoic acid)

Potassium benzoic acid Calcium benzoic acid	
para-oxy-methyl benzoic acid para-oxy-ethyl benzoic acid para-oxy-propyl benzoic acid	Not less than 1.0 (as para-oxy-benzonate)
Propionic acid Sodium propionate Calcium propionate	Not less than 1.0 (as propionic acid)
Mixed used of above Preservatives	Not less than 1.0 (as the sum of sorbate, benzoate, para-oxy-benzonate, and propionate)

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

6) Test Methods

(1) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(2) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

(3) Lead

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

5. Sugars

1) Definition

Sugars refer to crystalline powdery forms of white sugar and brown sugar etc. that were processed by using sugar solution or crude sugar extracted from sugar canes or sugar beets.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) When manufacturing sugars, the melting, filtration, and crystallization processes shall be included.

4) Food Types

(1) White sugar

White sugar refers to a white colored sugar product manufactured by purification of the sugar solution or crude sugar.

(2) Brown sugar

Brown sugar refers to a brown colored sugar product manufactured by purification of the sugar solution or crude sugar.

(3) Other Sugars

Other sugars refer to products that are manufactured by purifying and processing the sugar solution or crude sugar and adding foods or food additives.

5) Specifications

Type / Category	White Sugar	Brown Sugar	Other Sugars
(1) Appearance	It should be colorless or white crystals, crystalline powder or mass with sweet taste	It should be brown colored crystals, crystalline powder or mass with sweet taste	-
(2) Sugar content (%)	Not less than 99.7%	Not less than 97.0%	Not less than 86.0
(3) Artificial sweetener	Shall not be detected	Shall not be detected	Shall not be detected
(4) Lead (mg/kg)	Not more than 0.5	Not more than 1.0	Not more than 1.0
(5) Sulfur	Not more than 20.0	Not more than 20.0	Not more than 20.0

dioxide (mg/kg)			

6) Test Methods

(1) Sugar content (Sugar)

26 g sample is transferred into 100 mL of mass flask, and add 80 mL of distilled water and completely dissolve the. Then 1 mL of alkaline solution of lead acetate is slowly added and distilled water is filled up to the mark. When the surface of solution develops foam, one drop of ethanol is added to settle down the foam and the solution is mixed vigorously. If necessary, a small amount of diatomic earth is added then the mixture is filtered using a filter paper. The initial 25 mL of filtered solution is discarded and the next filtered solution is used as test sample according to C. Measurement of Optical Rotation, 1.1.4.1.3 Sucrose, 1. Food Component Test Methods in Article 9. General Testing Methods.

(2) Artificial Sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(3) Lead

It shall be tested according to 7.1. Methods for Heavy Metals in Article 9. General Testing Methods.

(4) Sulfur Dioxide

It shall be tested according to 2.5 Sulfurous Acid, Hyposulfurous Acid and Their Salts in Article 9. General Testing Methods.

6. Glucose

1) Definition

Glucoses refer to liquid, powder, or crystalline glucose that is produced by applying the glycosylation and refinement processes of starches as main ~~base~~ materials.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Liquid glucose

Liquid glucose refers to a liquid form manufactured by processing starches through saccharification, filtration, concentration, purification and processing the resultant glucose solution.

(2) Powder · crystalline glucose

Powder · crystalline glucose refers to a crystallized or dried form of concentrated glucose solution.

5) Specifications

Types / Category	Liquid glucose	Powder · crystalline glucose
(1) Dextrose equivalent (D.E)	Not less than 80.0	-
(2) Artificial sweetener	Shall not be detected	Shall not be detected
(3) Dextrin powder (%)	-	Not more than 4.0
(4) Lead (mg/kg)	Not more than 0.5	Not more than 0.5

6) Test Methods

(1) Glucose equivalent weight (D.E)

It shall be tested according to 1.1.4.1.2 Reducing sugar test method described in 1. Food Component Test Methods in Article 9. General Testing Methods. After determining the concentration of invert sugar, its equivalent concentration as glucose is calculated by following equation.

$$\text{Glucose equivalence} = \frac{\text{Reducing sugar (as in the form of glucose \%)}}{\text{Sugar solids in sample (\%)}} \times 100$$

(2) Artificial Sweetener

It shall be tested according to2.2.1 Sodium Saccharin in Article-9. General Testing Methods.

(3) Dextrin powder

It is yielded by deducting the glucose concentration measured by the Wallstheta·Sheudal method from 100. If necessary, judgment is made by comparing the color intensity of the spot for standard crystalline glucose with that of the sample on the filter chromatography.

* Wallstheta·Sheudal method

As of glucose, 1.5-2 g (as of glucose) of sample is mixed with distilled water to make a final volume of 100 mL, and 10 mL from the sample preparation is added to an erlenmeyer flask, and 25 mL of 0.1 N of iodine solution is added and mixed well at room temperature. After, 35 mL of 0.1 N Sodium hydroxide solution is added in small doses and allowed to settle for 15 minutes (When the sugar content in the sample is small, it may take 20 minutes for settlement). After settlement, the solution is treated with diluted sulfuric acid to make it acidic. At this step, dissociated iodine is titrated by 0.1 N thiosodium sulfate solution. As the endpoint of the titration nears, 1 mL of starch solution is added to the solution and titration is repeated.

The volume of 0.1 N thiosodium sulfate solution used for the titration of sample free control is deducted from the total titrated volume of thiosodium sulfate solution for sample to be used to calculate the amount of sugar.

In this method, 1 mL of 0.1 N iodine solution is equivalent to 9.005 mg of glucose.

(4) Lead

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

7. Fructose

1) Definition

Frutose refers to sugar products that are processed by isomerization of glucose solution, produced by the glycosylation of starch as main materials, or the product that further processed hydrolyzed solution of sugars, such as liquid fructose, crystalline fructose, etc.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Liquid fructose

Liquid fructose refers to a sugar product that adopted isomerization process for glucose or liquid glucose solution produced by liquefaction, glycosylation, filtration, purification, and concentration of starch, or the concentrated liquid product that is earned by the hydrolysis of sugar.

(2) Crystalline fructose

Crystalline fructose refers to a crystalline or powdery form of fructose that is dried by crystallization of concentrated liquid fructose.

(3) Other Fructoses

Other fructoses refer to products manufactured by adding foods or food additives to above food types (1) ~ (2)

5) Specifications

Type / Category	Liquid fructose	Crystalline fructose	Other fructoses
(1) Fructose (%)	Not less than 35.0 (based on anhydride)	-	Not less than 35.0 (based on anhydride)
(2) Artificial sweetener	Shall not be detected	Shall not be detected	Shall not be detected
(3) Specific rotation[α] D^{20}	-	-89.0 ~ -93.5	-
(4) Lead (mg/kg)	Not more than 0.5	Not more than 0.5	Not more than 0.5

6) Test Methods

(1) Fructose

For the measurement, 1 g sample is diluted with distilled water to yield a solution that will contain approximately 40 μg of fructose in 1 mL of the solution. From the preparation, 1 mL of the solution is transferred into a test tube placed in an ice-bath, and 4 mL of cysteine sulfate regent and 2 mL carbazol sulfate regent is added sequentially. The mixture is incubated for 30 minutes at 40˚C for reaction, and the reaction is stopped by transferring the test tube into ice water, and the tube is slowly shaken in the water bath at room temperature for 30 seconds. Its absorbance is measured at 560 nm, and the fructose content is calculated by using a standard curve for standard fructose solution.

- Cysteine sulfate reagent

  150 mg of *L*-cysteine monochrloride salt ($C_3H_7NO_2S \cdot HCI \cdot H_2O$) is dissolved in 10 mL of distilled water, then 200 mL of 70% sulfuric acid is added.

- Carbazol sulfate reagent

  12 mg of carbazol is dissolved in 10 mL of ethanol, and then 100 mL of 70% sulfuric acid is added.

(2) Artificial Sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(3) Specific Rotation

10 g (converted based on the water content of the sample) of sample as in anhydrous matter is accurately weighed and dissolved in distilled water. Then 0.2 mL of ammonia test solution and distilled water is added to make the total volume of 100 mL. Then, the optical rotation value is determined by using a 200 mm Polarimeter at 20˚C and the resulting value is multiplied by 5 to get the specific rotation power.

(4) Lead

It shall be tested according to 7.1 Test Methods for Heavy Metals in Article 9. General Testing Methods.

8. Glutinous Rice Jellies (Yeat)

1) Definition

Glutinous rice jellies(Yeat) refer to products manufactured by the processing of sugar solution that is yielded by the hydrolysis of major base material of starch or starchy substances using enzyme or acids.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Molasses

Molasses refers to a viscous liquid that is filtered and concentrated after the hydrolysis of starch or starchy base materials using acid or amylase.

(2) Other yeats

Other yeats refer to products that are produced by processing molasses or by adding foods or food additives to the processed molasses.

(3) Dextrin

Dextrin refers to products produced by processing the resulting product from hydrolyzing starch or grain flour using acids of enzymes.

5) Specifications

Types / Category	Molasses	Other yeat	Dextrin
(1) Dextrose equivalent (D.E)	Not less than 20.0	Not less than 10.0	Not less than 20.0
(2) Artificial sweetener	Shall not be detected	Shall not be detected	Shall not be detected
(3) Lead (mg/kg)	Not more than 1.0	Not more than 1.0	Not more than 1.0

6) Test Methods

(1) Dextrose equivalent (D.E)

It shall be tested according to (1) Dextrose Equivalent (D.E), 6) Test Methods in 6. Glucose.

(2) Artificial Sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(3) Lead

It shall be tested according to 7.1 Test Methods for Heavy Metals described in Article 9. General Testing Methods.

9. Sugar Syrups

1) Definition

Sugar syrups refer to a liquid form that is processed by filtration, and concentration of sugar juice harvested from sugar canes, sugar beets, and maple tree.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

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

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

(3) Artificial sweetener : Shall not be detected

6) Test Methods

(1) Total Sugar

It shall be tested according to by 1.1.4.1.3 Sucrose, 1. Food Component Test Methods in Article 9. General Testing Methods.

(2) Lead

It shall be tested according to 7.1 Test Methods for Heavy Metals in Article 9. General Testing Methods.

(3) Artificial Sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

10. Oligosaccharides

1) Definition

Oligosaccharides refer to products such as fructo-, isomato-, galacto-, malto-, xylo-, or gentio-oligosaccharides which are produced by the processing of sugar solutions.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Fructo-oligosaccharides

Fructo-oligosaccharide refers to a liquid or powdery form of product that uses sugar solution that is enzymatically processed to have at least one fructose molecule binding at its structure by using sugary base materials, which is then processed by following processing steps of filtration, purification, and concentration.

(2) Isomalto-oligosaccharide

Isomalto-oligosaccharide refers to a liquid or powdery form of product that is processed by filtration, purification, and concentration steps by using sugar solution that is produced by enzymatic digestion on sugary base materials, which rearranges the molecular structures to be glucose based form.

(3) Galacto-oligosaccharide

Galacto-oligosaccharide refers to a liquid or powdery product that is produced by using trans-galacto-oligosaccharide sugar solution produced by enzymatic digestion of sugary base materials, or the product which is processed by filtration, purification and concentration of raffinose and stachyose sugar solution extracted from sugar beet or soybeans.

(4) Malto-oligosaccharide

Malto-oligosaccharide refers to a liquid and powdery form of product that is processed by using sugar solution produced by enzymatic digestion of sugary base materials to produce 3~10 linearly bound glucose molecules in its structure.

(5) Xylo-oligosaccharide

Xylo-oligosaccharide refers to a liquid and powdery form of product that is processed by using sugar solution produced by enzymatic digestion of xylan used as a base material.

(6) Gentio-oligosaccharide

Gentio-oligosaccharide refers to a oligosaccharide manufactured through filtration, purification, and concentration of sugar solution obtained from enzymatic treatment to induce beta-binding of glucose molecules to carbohydrate components.

(7) Other oligosaccharides

Other oligosaccharides refer to oligosaccharide products manufactured by adding foods or food additives to one of the above oligosaccharides (1) ~ (6).

5) Specifications

(1) Oligosaccharide content (%)

① Each of Fructo-, Isomalto-, Galacto-, Xylo-, and Gentio- oligosacchrides shall have not less than 10.0 for each relevant oligosaccharide

② Malto-oligosaccharide : Not less than 40

③ Other-oligosacchride : Shall not be less than the content of individual oligosaccharide.

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

6) Test Methods

(1) Oligosaccharides

① Fructo-oligosaccharide

Ⓐ Equipment

High Performance Liquid Chromatography (HPLC)

Ⓑ Regents

ⓐ Acetonitrile : HPLC grade

ⓑ Glycerol : Special grade

ⓒ Ethanol : Special grade (99.5%)

ⓓ Diatomic Earth: Filter-preparative purpose (refined product)

ⓔ 80% Ethanol : It is prepared by mixing 99.5% ethanol and distilled water at the ratio of 80:20 (v/v).

ⓕ 5% Glycerol : It is prepared by mixing 5 g of accurately weighed glycerol with 50 mL ethanol in a 100 mL measuring flask to fully dissolve the glycerol. Then fill with distilled water up to the mark, and the preparation is used as an internal standard material (other than glycerol, arabinose may also be used as the internal standard material)

Ⓒ Preparation of standard solution

0.4 g for each 1-Ketose (GF_2), Nystose (GF_3), and 1-F Fructofuranosyl Nystose (GF_4) of all regents are weighed and mixed with 10 mL of distilled water in a 20 mL measuring flask to dissolve these regents completely, and additional distilled water is added to fill up to the mark. The resulting mixture is the standard stock solution. 1 mL, 2 mL, 3 mL, 4 mL and 5 mL of the standard stock solution is accurately measured and transferred to each 10 mL measuring flask. Then, 1 mL of 5% glycerol is added and distilled water is filled up to the mark. The resulting mixture is used as standard solution.

Ⓓ Preparation of sample solution

ⓐ For samples, holding negligible amounts of fats.

A sufficient amount of sample is accurately weighed to hold approximately 0.2-2 g of Fructo-oligosaccharide and 20 mL of distilled water is used to dissolve or extract it in a 100 mL measuring flask heating is used while mixing or ultrasonication is used). After the complete dissolution of the sample, 20 mL of 5% glycerol solution is added and filled up with distilled water up to 100 mL marking. If necessary, the solution can be used after filtration (No.5B). 25 mL of the prepared solution accurately measured and transferred to a 50 mL measuring flask, then ethanol is filled up to the mark to dilute. If the solution develops precipitation or increases the turbidity, it is filtered (No. 5B) and the filtrate is used as the test solution.

NOTE1: If sample holds large amount of insoluble matters, it is filtered with (No.5B) filter paper. The filtered solution is transferred into a 100 mL measuring flask, and the same analysis method as above is followed.

ⓑ For samples, containing large amount of fats.

In the case of liquid sample, an appropriate amount of sample is accurately measured and transferred to a beaker and neutralized if necessary to contain 0.2~2 g as of Fructo-oligosaccharide. (There is a concern of hydrolysis of Fructo-oligosaccharides if the sample is heat-treated when it is acidic)

Then diatomic earth is added to the above solution and mixed well (The appropriate amount of diatomic earth should be the amount that turns crumbly after added). The preparation is dried under decompressed atmospheric condition for 2-4 hours, and whole dried amount is transferred into a paper filter tube to undergo 8-16 hours of fat extraction using a soxhlet fat extractor using petroleum ether. After the fat extraction, whole amount in the paper filter tube is extracted by water following the above mentioned method ⓐ. If the sample for fat extraction is in powder form, it is directly transferred to the filter paper without adding diatomic earth, then the rest of the procedure is carried out as same as above.

Ⓔ Test procedure

ⓐ High Performance Liquid Chromatography operation condition

- Column : μ-Bondapak CH, p-nitrophenol hydroxylation 2-10 (PNH_2-10) equivalents (Biosil Amino 5S, Shodex RSpak DC-613, Nueleosil NH_2, Lichrosorb NH_2, etc.)
- Mobile phase : Acetonitrile:water (65:35)

  (Can be adjusted based on the type and condition of column. The ratio of acetonitrile and water is adjusted from 65:35 to 70:30 and small volume of ethyl-alcohol can be added for the adjustment.)
- Flow rate : 1.0 mL/min
- Detector : Refractive Index detector (RI)

ⓑ Quantitative test

Each of 10 μL of standard solution for Fructo-oligosaccharides is injected to get chromatograms of Fructo-oligosaccharides and internal standard material. Then the peak area and height is determined for fructo-oligosaccharides and internal standard material and calibration curve is recorded. Inject 10 μL of test solution and get the chromatograms of Fructo-oligosaccharides and internal standard material. Then calculate the peak area and

height for each of them and calculate the content of total Fructo-oligosaccharides (GF_2+GF_3+GF_4) in the sample using the following equation.

<Calculation>

$$\text{Total fructose} - \text{oligosaccharides content (\%)} = (A + B + C) \times D \times \frac{100}{E} \times \frac{100}{1000}$$

A : Concentration (mg/mL) of GF_2 in test solution obtained from calibration curve

B : Concentration (mg/mL) of GF_3 in test solution obtained from calibration curve

C : Concentration (mg/mL) of GF_4 in test solution obtained from calibration curve

D : Dilution factor

E : Sampling weight (g)

② Isomalto-oligosaccharide

Ⓐ Equipment

High Performance Liquid Chromatography

Ⓑ Regents

ⓐ 50% Ethyl alcohol

ⓑ Activated Carbon: the grade used for rice wine fermentation or sugar solution bleaching

ⓒ Ion-exchange resin: Enforced acid type(H-type) or Enforced alkaline type(OH-type)

ⓓ Perlite

ⓔ Acetonitrile : HPLC grade

ⓕ Standard sugars

Monosaccharides - Glucose, Fructose

Disaccharides - Maltose, *Isomaltose, Sucrose, *Kojibiose, *Nigerose

Cellotriose - Maltotrisose, *Pannose, *Isomaltotriose

Cellotetrose - Maltotetrose, *Isomaltotetraose

Pentose - Maltopentaose, *Isomaltopentaose

Hexose - Maltohexaose, *Isomaltohexaose

Heptaose - Maltoheptaose, *Isomaltoheptaose

(* indicates sugar substance diverged from Isomato-oligosaccharides)

Ⓒ Preparation of Standard solution

ⓐ Exclusion ion chromatography system : Each degree of polymerized linear sugars is accurately weighed to 50 mg, and mixed with 50 mL deaired distilled water in a 100 mL measuring flask. If the sample is not easily dissolved, use elevated temperature. After cooling, add 100 mL of distilled water to use the mixture as a standard solution.

ⓑ Reverse phase ion chromatography : Each 100 mg of isomalto-oligosaccharide diverged sugar dissolved with 1 mL of distilled water is used as a standard solution.

Ⓓ Preparation of test solution

ⓐ For samples, containing negligible amount of fats

Suitable amount (0.5~5 g)of sample is accurately weighed so that it contains approximately 500 mg of isomalto-oligosacchraides. Then, 30 mL of distilled water or 50% ethanol solution (for sample that contains protein) is added and the mixture is heated for dissolution or extraction. The extracted solution is purified by 0.5 g of activated carbon and ion-exchange resin (1.5 g of cation and anion mixed in the ratio of 1:2) The purified solution is filled up with distilled water to have a total volume of 500 mL.

ⓑ For samples, containing large amount of fats

Suitable amount of (0.5~5 g) of isomalto-oligosaccharide is accurately weighed. If it is in a powdery form, add directly into fat extractor and if it is in a liquid form, neutralized when necessary (outer range of pH 4~10) and dispersed by adding perlite until it turns crumbly, Then, it is subjected to fat extraction for 8~16 hours. After the fat extraction, the entire amount of sample in thimble filter is collected and subjected to same post extraction operation as above ⓐ

NOTE 1. If sugar, having almost sample molecular weight as 2~5 degree polymerization, lactose, fructo-oligosaccharide, coupling sugar and galacto-oligosaccharide are mixed together in the sample, each of them is analyzed separately with the respective methods. However, the presence of starchy sugars such as isomerized sugars, glucose, and molasses do not interfere with the analysis of Isomalto-oligosaccharides.

Ⓔ Test Procedure

ⓐ High Performance Liquid Chromatography operation condition

Exclusion ion chromatography system

- Column : ∮ 8 mm× 200 mm MCI GEL CKO 4S equivalents
- Guard column : ∮ 8 mm× 50 mm MCI GEL CKO 8S equivalents
- Column temperature : 65˚C
- Mobile phase : Water
- Flow rate : 0.4 mL/min
- Detector : Refractive Index detector (RI)

ⓑ Reverse phase ion chromatography

- Column : ∮ 4.6 mm× 250 mm TTSK GEL NH_2-60 equivalents
- Column temperature : 35˚C
- Mobile phase: Acetonitrile : Water(63:37)
- Flow rate : 0.8 mL/min
- Detector : Refractive Index detector

Ⓕ Quantitative test

ⓐ Standard curve preparation : Standard solutions of 5, 10, 15, 20, and 25 mL are transferred into each 50 mL mess flask, and filled up with distilled water to the marking to make standard solutions, that will contain 25, 50, 75, 100, and 125 mg of sugar in each 50 mL preparation. 10μL of each preparation is injected into the HPLC system, and Peak area and height is recorded to formulate a standard curve.

ⓑ Calculation

i. The peak area and height gathered from the exclusion ion chromatography will be used to earn the sugar concentration by the degree of polymerization from the standard curve, and the result is calculated as below.

Degree of Polymerization DP1 (Monosaccharide) : A

Degree of Polymerization DP2 (Disaccharide) : B

Degree of Polymerization DP3 (Cellotriose) : C

Degree of Polymerization DP4 (Cellotetrose) : D

Degree of Polymerization DP5 (Pentose) : E

Degree of Polymerization DP6 (Pentose) : F

Degree of Polymerization DP7 (Pentose) : : G

ⓒ Each sugar content (%) yielded by analyzing the data produced by reverse phase ion chromatography is as following.

DP1 Fructose	A_1
DP1 Glucose	A_2
DP2 Maltose	B_1
DP2 Sucrose	B_2
DP2 Isomaltose	B_3
DP2 Nigerose	B_4
DP2 Gojibiose	B_5
DP3 Maltotriose	C_1
DP3 Pannose	C_2
DP3 Isomaltotriose	C_3
DP3 Unidentified (Diverged sugar)	C_4
DP4 Maltotetraose	D_1
DP4 Isomaltotetraose	D_2
DP5 Maltopentaose	E_1
DP5 Isomaltopentaose	E_2
DP6 Higher polymerization than 6	F
DP6 Isomaltohexaose	F_2
DP7 Maltoheptaose	G_1
DP7 Isomaltoheptaose	G_2
DP8 Higher polymerization	H

(NOTE : Isomalto-oligsaccharides do not include linear degree of polymerization more than DP4 and any compounds, having more than degree of polymerization than DP8).

<Calculation>

DP1 Fructose $\quad A\ mg \times \frac{A1}{A1+A2} = a_1\ mg$

DP1 Glucose A mg × $\frac{A2}{A1+A2}$ = a_2 mg

DP2 Maltose B mg × $\frac{B1}{B1+B2+B3+B4+B5}$ = b_1 mg

DP2 Sucrose B mg × $\frac{B2}{B1+B2+B3+B4+B5}$ = b_2 mg

DP2 Isomaltose B mg × $\frac{B3}{B1+B2+B3+B4+B5}$ = b_3 mg※

DP2 Negerose B mg × $\frac{B4}{B1+B2+B3+B4+B5}$ = b_4 mg※

DP2 Kojibiose B mg × $\frac{B5}{B1+B2+B3+B4+B5}$ = b_5 mg※

DP3 Maltotriose C mg × $\frac{C1}{C1+C2+C3+C4}$ = c_1 mg

DP3 Pannose C mg × $\frac{C2}{C1+C2+C3+C4}$ = c_2 mg※

DP3 Isomaltotriose C mg × $\frac{C3}{C1+C2+C3+C4}$ = c_3 mg※

DP3 Unidentified (Diverged sugar) C mg × $\frac{C4}{C1+C2+C3+C4}$ = c_4 mg※

DP4 Maltotetraose D mg × $\frac{D1}{D1+D2}$ = d_1 mg

DP4 Isomaltotetraose D mg × $\frac{D2}{D1+D2}$ = d_2 mg※

DP5 Maltopentaose E mg × $\frac{E1}{E1+E2}$ = e_1 mg

DP5 Isomaltopentaose E mg × $\frac{E2}{E1+E2}$ = e_2 mg※

DP6 Higher polymerization than 6 F mg = f mg

DP6 Maltohexaose F mg × $\frac{F1}{F1+F2}$ = f_1 mg

DP6 Isomaltohexaose F mg × $\frac{F2}{F1+F2}$ = f_2 mg※

DP7 Maltoheptaose G mg × $\frac{G1}{G1+G2}$ = g_1 mg

DP7 Isomaltoheptaose G mg × $\frac{G2}{G1+G2}$ = g_2 mg※

DP8 Higher polymerization H mg = h mg

Substantially, defining the sampling weight and dilution factor as I mg and L, respectively, and considering the ※marked sugar represent diverged sugar, the diverged sugar content (%) could be calculated by = $(b_3 + b_4 + b_5 + c_2 + c_3 + c_4 + d_2 + e_2 + f_2 + g_2) \times L \div I \times 100$.

③ Galacto-oligosaccharide (trans-galacto-oligosaccharide)

Ⓐ Equipment

High Performance Liquid Chromatography

Ⓑ Regents

ⓐ 20%(w/v) Sulfosalicylic acid : 20 g of special grade sulfosalicylic acid is dissolved with distilled water to make total volume of 100 mL solution.

ⓑ Ribose : Special grade

ⓒ Arabinose : Special grade

Ⓒ Preparation of standard solution

2 g of galacto-oligosaccharide is accurately weighed and dissolved with distilled water to make final volume of 50 mL.

Ⓓ Preparation of test solution.

Suitable amount of sample is accurately weighed to contain approximately 0.1-1 g of galacto-oligosaccharide, and it is dissolved with distilled water to make final solution of 50 mL. The prepared solution is filtered with 0.45 μm filter and used as test solution.

NOTE 1. For the samples, requiring protein removal procedure due to the use of several drops of sulfosalicylic acid which activates the formation of insoluble proteins, it is removed by centrifugation or filtered by passing through Sep pak C_{18} cartridge. When these procedures are required, Ribose and Arabinose is used as internal standard.

NOTE 2. For the samples, containing large amount of fats, The pre-treatment procedure used for Fructo-oligosaccharide is used for these samples' pre-treatment.

NOTE 3: If oligosaccharides of DP3 ~ DP6 except galacto-oligosaccharide are included in the sample, use appropriate enzymes to digest such oligosaccharides into monosaccharides or disaccharides and then, perform the analytical procedures. However, the presence of isomerized sugar, sugar, or polysaccharides does not interfere with the analysis of galacto-oligosaccharide.

Ⓔ Test Procedure

ⓐ High Performance Liquid Chromatography operation condition

- Column: Shodex Ionpak KS-802 equivalents or Reverse phase amino columns
- Column temperature : 80˚C

- Mobile phase : Water
- Flow rate : 0.4 mL/min
- Detector: Refractive Index (RI) detector

ⓑ Quantitative test

2, 4, 6, 8, and 10 mL of standard solutions of galacto-oligosaccharide are transferred into 20 mL mess flasks, respectively, and filled up with distilled water to have final volume of 20 mL. From the prepared standard solution, 10 μL is withdrawn from each preparation to inject into High Performance Liquid Chromatography to acquire peak area and height to produce standard curve. The content of galacto-oligosacchride (%) in the sample is calculated by following equation.

$$\text{Galacto} - \text{oligosaccharide (\%)} = \text{B mg/mL} \times \frac{50\ \text{mL}}{\text{Ag}} \times \frac{100}{1000}$$

A: Sampling weight (g)

B: Concentration of galacto-oligosaccharide obtained from the standard curve (mg/mL)

④ Galacto-oligosacchrides (Raffinose, Stachyose)

Ⓐ Regents

ⓐ Sulfosalicylic acid

ⓑ Galacto-oligosaccharides(Raffinose, Stachyose) standard solution

Each oligosacchrides of 0.6 g was accurately weighed and dissolved with distilled water to make final volume of 20 mL.

Ⓑ Preparation of test solution

ⓐ For samples, holding negligible amount of fats.

Suitable mount of sample (0.07-0.7 g of each galacto-oligosaccharide) is exactly weighed, and dissolved with distilled water or extracted to make final volume of 50 mL. The whole preparation is filtered with 0.45 um filter.

ⓑ For samples, holding large amount of fats.

If the sample if in liquid form, a suitable amount (same as ⓐ above) is accurately weighed and neutralized if necessary. Diatomic earth is added to the sample and

mixed well. Then, the preparation is dried under decompressed atmospheric condition at 60± 2˚C for 2-4hours. After the drying, the whole amount is transferred into a paper filter tube for the fat extraction by petroleum ether using a soxhlet fat extractor for 8-16 hours. After the removal of fat, the whole amount is taken from the thimble filter and processed as the procedure ⓐ above. If the sample is in the powder form, it is directly put into the thimble filter without addition of diatom and then, processed according to the same procedures.

NOTE 1. For the samples containing protein, several drops of 0.2 g/ mL sulfosalicylic acid are added to remove the protein. If dextrin is mixed in the samples, it is hydrolyzed by the addition of glucoamylase.,

Ⓒ Test Procedure

ⓐ High Performance Liquid Chromatography operation condition

- Column: Shodex Ionpak KS-802 equivalents
- Column temperature : 70˚C
- Mobile phase : Water
- Flow rate : 1.0 mL/min
- Detector : Refractive Index (RI) detector

ⓑ Quantitative test

Each 1, 2, 3, 4, and 5 mL of standard solutions of galacto-oligosaccharide are accurately measured and transferred into the corresponding 10 mL mess flasks, and filled with distilled water to have a final volume of 10 mL. 10μL is withdrawn from each preparation to inject into High Performance Liquid Chromatography to acquire peak area and height to produce standard curve. The content of galacto-oligosacchride (%) in the sample is calculated by following equation.

$$\text{Galacto} - \text{oligosacchraide}\ (\%) = (\mathrm{A} + \mathrm{B}) \times \frac{50}{\mathrm{C}} \times \frac{100}{1000}$$

A : Concentration of galacto-oligosacchride obtained from the standard curve mg/mL)

B : Concentration of galactor-oligosacchride in test solution, obtained from the standard curve (mg/mL)

C : Sampling weight (g)

⑤ Malto-oligosaccharide

Ⓐ Equipment

ⓐ High Performance Liquid Chromatography

Ⓑ Regents

ⓐ 50% Ethyl-alcohol

ⓑ Active carbon: grade for the manufacture of the refined rice wine or the bleaching of the sugar solution.

ⓒ Ion-exchange resin: Enforced acid type (H-type) or Enforced alkaline type (OH-type)

ⓓ Perlite

ⓔ Water : HPLC grade

ⓕ Standard sugars

Cellotriose (DP3) - Maltotriose

Cellotetrose (DP4) - Maltotetraose

Pentose (DP5) - Maltopentaose

Hexose (DP6) - Maltohexaose

Heptose (DP7) - Maltoheptaose

Ⓒ Preparation of standard solution

50 mg of linear sugars of each degree of polymerization is accurately weighed to dissolve with 50 mL of deaerated distilled water. If necessary, the standard sample may be heated to facilitate dissolution. After cooling, distilled water is added to achieve final volume of 100 mL. Then the preparation is used as a standard solution.

Ⓓ Preparation of test solution

ⓐ For samples, containing negligible amounts of fats

4 g of sample is accurately weighed and 30 mL of distilled water or 50% ethanol (if contains protein) is added and heated for dissolution or extracted. The extracted solution is purified by mixing with 0.5 g of active carbon and ion-exchange resin (1.5

g that is mixed in the ratio of 1:2 of cation to anion), and filled up with distilled water to make the final volume of 100 mL to be used as a test solution.

ⓑ For samples, containing large amounts of fats

4 g of sample is accurately weighed. If the sample is in powder form, it is directly put in to the extractor. If the sample is in liquid form, it is neutralized first (except pH range of 4-10), if necessary, and perlite is added until it turns crumbly. Then, it is subjected to fat extraction for 8-16 hours. After the fat extraction, the whole sample in thimble filter is recovered to follow the same procedures as described in ⓐ after the extraction.

NOTE 1. If sugars, lactose, fructo-oligosaccharides, coupling sugar and galacto-oilgosaccharides with almost identical degree of polymerization of 2~5 are mixed in the sample, the individual sugar content is analyzed using the corresponding method. However, if starchy sugars such as isomerized sugars, glucose and molasses are mixed in the samples, these sugar types do not interfere with the analysis of malto-oligosaccharide.

Ⓔ Test procedure

ⓐ High Performance Liquid Chromatography operation condition

- Column: Aminex HPx42A(Bio Rad) or equivalent exclusion ion-exchange type.
- Column temperature: 85˚C
- Mobile phase: Water
- Flow rate: 0.6 mL/min
- Detector: Refractive Index (RI) detector

ⓑ Plotting Standard curve

10 μL of each concentration of standard solution is injected and analyzed. The standard curve is plotted by calculating the area of malto-oligosaccharide (mg) on the horizontal axis and chromatogram on the vertical axis.

ⓒ Calculation

Read the area of malto-oligosaccharide and calculate the content of malto-oligosaccharide in the sample solution from the standard curve.

$$\text{Malto} - \text{oligosaccharide content (\%)} = \frac{(A+B+C+D+E)\ mg}{Sample\ weight\ (mg)} \times \text{Dilution factor}$$

DP3	Maltotriose	A mg
DP4	Maltotetraose	B mg
DP5	Maltopentaose	C mg
DP6	Maltohexaose	D mg
DP7	Maltoheptaose	E mg

⑥ Xylo-oligosaccharide

Ⓐ Equipment

High Performance Liquid Chromatography

Ⓑ Regents

ⓐ Water : HPLC grade

ⓑ Acetonitrile : HPLC grade

ⓒ Perlite

ⓓ Standard sugars

Disaccharide	- xylobiose
Cellotriose	- xylotriose
Cellotetrose	- xylotetraose
Pentose	- xylopentaose
Hexose	- xylohexaose

Ⓒ Preparation of Standard solution

Suitable amount of sample is accurately weighed so that 50~100 mg of xylo-oligosaccharides of each degree of polymerization is contained in the sample. Then it is dissolved in 50 mL of deaerated distilled water. The preparations are filtered with 0.45 μm filter to be used as standard solutions.

Ⓓ Preparation of Test solution

ⓐ For samples, containing negligible amounts of fats

3 g of sample is accurately weighed and dissolved in water to make the final volume of 30 mL. The solution is filtered with 0.45 μm filter to be used as a test solution.

ⓑ For samples, containing large amounts of fats

3 g of sample is accurately weighed. If the sample is in powder form, it is directly put in to the extractor. If the sample is in liquid form, it is neutralized first, if necessary, and perlite is added until it crumbly. Then it is subjected to fat extraction for 8-16 hours. After the fat extraction, the whole amount of sample in thimble filter is completely recovered to prepare the test solution according to the same procedure described in as used in ⓐ.

Ⓔ Test Method

ⓐ High Performance Liquid Chromatography operation condition

- Column: Carbohydrate column 4.6 × 250 mm or equivalent columns
- Column temperature : Room temperature
- Mobile phase : Acetonitrile: Water (75:25)

(The ratio is adjustable according to the type and condition of column)

- Flow rate : 1.2 mL/min
- Detector: Refractive Index (RI) detector

ⓑ Quantitative test

10 μL of each concentration of standard solution is injected and analyzed. The standard curve is plotted by calculating the area of xylo-oligosaccharide(mg) on the horizontal axis and chromatogram on the vertical axis. The xylo-oligosaccharide content (%) in the sample is calculated by following equation

$$\text{Xylo}-\text{oligosaccharide content (\%)} = \frac{(A+B+C+D+E)\ \text{mg}}{\text{Sample weight (mg)}} \times \text{Dilution factor} \times 100$$

xylobiose A mg
xylotriose B mg
xylotetraose C mg
xylopentaose D mg
xylohexaose E mg

⑦ Gentiooligosaccharides

Ⓐ Equipment

High Performance Liquid Chromatography

Ⓑ Reagents

ⓐ Water: HPLC grade

ⓑ Sodium Hydroxide

ⓒ Sodium acetate

ⓓ Perlite

ⓔ Standard sugar

Disaccharides Gentiobiose, Cellobiose

Ⓒ Preparation of standard solution

Suitable amount of sample is accurately weighed to assure that it contains about 50~100 mg of gentiobiose and cellobiose and it is dissolved in 1 L of de-aerated water. The solution is filtered through 0.45 μm filter, which is used as the standard solution.

Ⓓ Preparation of Test solution

ⓐ For sample containing negligible amount of fat

100 mg of sample is accurately taken and dissolved in water to make the final volume of 1 L. This solution is filtered through 0.45 μm, which is used as the test solution.

ⓑ For sample containing large amount of fat

100 mg of sample is accurately taken. For powdered sample, it is put directly into the extractor. For liquid sample, it is neutralized, if necessary, and added with Perlite until it becomes crumbly. Then, fat extraction is performed for 8-16 hours. After fat extraction, the whole amount in the thimble filter is recovered and then, the procedures of ⓐ are repeated.

Ⓔ Test procedure

ⓐ HPLC operation condition (1)

- Column: PA-1 Column 4.6 × 250 mm or equivalent one
- Column temperature : Room temperature
- Mobile phase :

A: 150 mM Sodium Hydroxide

B: 150 mM Sodium Hydroxise + 600 mM Sodium Acetate

- Flow rate : 1.0 mL/min
- Detector : Pulsed Amperometric Detecter

ⓑ HPLC operation condition (2)

- Column : Aminex HPX-42A Column 7.8×300 mm or equivalent exclusion ion-exchange type
- Column temperature : 85˚C
- Mobile phase : Water
- Flow rate : 0.6 mL/min
- Detector : Refractive Index detector (RI)

ⓒ Quantitative test

i. Plotting Standard curve

10μL of each concentration of standard solution is injected and analyzed. The standard curve is plotted by calculating the area of gentio-oligosaccharide(mg) on the horizontal axis and chromatogram on the vertical axis.

ii. Calculation

The content of each degree of polymerization is calculated from the standard curve of each degree of polymerization, which is plotted according to the peak area or height resulted from exclusion ion-exchange type. The calculated content of each degree of polymerization is as follows.

Degree of Polymerization DP1 (Monosaccharide): A

Degree of Polymerization DP2 (Disaccharide): B

Degree of Polymerization DP3 or higher (Trisaccharide or higher levels): C

Sugar contents (%) of samples analyzed with use of PA-1 column are as follows;

DP1 Fructose	A_1
DP1 Glucose	A_2
DP2 Maltose	B_1
DP2 Gentiobiose	B_2
DP2 Cellobiose	B_3

More than DP3 C

<Calculation>

DP1 Fructose A mg × $\frac{A1}{A1+A2}$ = a_1 mg

DP1 Glucose A mg × $\frac{A2}{A1+A2}$ = a_2 mg

DP2 Maltose B mg × $\frac{B1}{B1+B2+B3}$ = b_1 mg

DP2 Gentiobiose B mg × $\frac{B2}{B1+B2+B3}$ = b_2 mg

DP2 Cellobiose B mg × $\frac{B3}{B1+B2+B3}$ = b_3 mg

Content of gentio-oligosaccharide (%) = (b2+b3) mg ÷ Sampling weight mg × Dilution factor × 100

(2) Lead

It shall be tested according to 7.1 Test Methods for Heavy Metals in Article 9. General Testing Methods.

11. Processed Meat and Egg Products

1) Definition

Processed meat and egg products refer to products that are manufactured and processed using meat or eggs as its main material (those not specified in the Processing Standards and Component Specifications of Livestock Products).

2) Requirements of Raw Material

(1) For non-domestic animals, raw materials should meet the methods of slaughtering and dismantling and the examination criteria as specified in the 「Livestock Products Sanitary Control Act」

3) Manufacturing and Processing Standards

4) Food Types

(1) Meat and egg product

Meat and egg product refers to egg, carcass, lean meat, the viscera and other parts of animals produced for consumption.

(2) Processed Meat Product

Processed meat product refers to a product that is manufactured and processed by the addition of other foods or food additives using meat as its main material.

(3) Processed Egg Product

Processed egg product refers to a product that is manufactured and processed by the addition of other foods or food additives using egg as its main material.

5) Specifications

(1) Nitrite ion (g/kg) : Not more than 0.07 (Limited to processed meat product)

(2) Volatile basic nitrogen (mg %) : Not more than 20 (Limited to meat product)

(3) Tar color : Shall not be detected (Limited to processed meat product)

(4) Coliform group : Not more than 10 per 1 g (Limited to heated products or pasteurized products)

(5) Bacterial count : Negative (Limited to sterilized products. For pasteurized processed egg products, not more than 10,000 per 1g)

(6) *Salmonella* spp. : n=5, c=0, m=0/25 g (Limited to pasteurized products)

(7) Enterohemmorrhagic *E. coli* : n=5, c=0, m=0/25 g (Limited to minced raw products).

(8) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic acid Potassium sorbate Calcium sorbate	Not more than 2.0 [as sorbic acid, limited to meat and processed meat (except seasoned meat, minced meat, processed rib product)]

6) Test Methods

(1) Nitrite ion

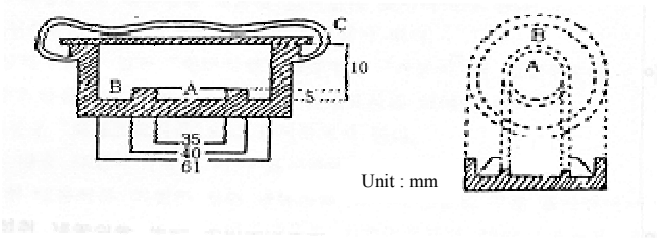
It shall be tested according to 2.6 Color Fixing Agent in Article 9. General Testing Methods.

(2) Volatile basic nitrogen (VBN)

① Micro-diffusion (Conway) method

Ⓐ Devices

ⓐ Diffuser : As illustrated below, a diffuser has the cover with a multi-layered glass which resembles a Petri dish. The body is divided into two concentric quarters, an inner A (35 mm in diameter) and outer B (61 mm diameter). The height of the inner quarter is approximately one half of that of the outer quarter. A diffuser must be tightly-sealed once the cover is properly located and the clip (C) is locked.



Ⓑ Reagents

ⓐ Tight-seal enhancer: Glycerin (The mixture of suitable amount of white Vaseline and liquid paraffin at the elevated temperature is also applicable)

ⓑ K_2CO_3 saturated solution: Dissolve about 60 g of K_2CO_3 (the highest purity) in approximately 50 mL distilled water, while heating the mixture. Then, cool down the solution away from NH_3 gas. Use the clear supernatant.

ⓒ Brunswick reagent: Dissolve 0.2 g of methyl red and 0.1 g of methylene blue with 300 mL ethanol. After filtration, keep the mixture in a amber bottle.

Ⓒ Preparation of Test solution

In the case of meat, obtaining a universally representative sample is relatively difficult due to the inconsistency in the quality and composition depending on each portion. Hence, several test samples must be collected varying their origins with a bias towards the flesh. Randomly collect 20-50 g of sample from 3 to 5 different places depending on the sample size and amount. Cut the samples into small pieces and blend them. Among these samples, accurately weigh 10 g (W) and place it into two different beakers (two sets of test will be done in order to get the average). Add 50 mL of distilled water in each beaker and stir well, and let it leach for 30 minutes before filtering. Prepare the test solution by neutralizing the filtrate with weak acid using 5% sulfuric acid and adding distilled water to make a fixed amount.

Ⓓ Test

Since the test method is a micro analysis using a neutralization method, a caution must be taken to avoid generating acidic or alkaline gas.

ⓐ Diffusion

Incline a diffuser slightly and accurately put 1.00 mL of test solution into the bottom of its outer shell by using a pipette (Vol) and then, put 1.00 mL of 0.01 N-H_2SO_4 into its inner shell A in the same way.

Apply a small quantity of airtight agent evenly around the cover, and then quickly put 1.00 mL of K_2CO_3 saturated solution on the top of the outer shell B, and close the cover immediately and fixing it with a clip. Then, incline the diffuser left and right, rotate it quietly to mix the test solution in outer shell B and the saturated solution of potassium carbonate (caution must be taken to avoid mixing the solutions in the outer/inner shell) at 25˚C for 1 hour (120 minutes at 20˚C, 140 minutes at 16˚C and, 160 minutes and longer at 10˚C) and leave them alone.

ⓑ Quantitative test

Open the cover, add a drop of Brunswik reagent to H_2SO_4 solution, which is in the inner shell and titrate it with 0.01 N-NaOH by using a micro burette, calculate the average of two attempts (a mL).

Apart from it, execute a blank test by using distilled water, instead of test solution, obtain the average of two tests (b mL) and calculate it according to the following formula.

$$\text{Volatile basic nitrogen (mg/\%)} = 0.14 \times \frac{(b - a) \times f}{W} \times 100 \times d$$

W : Sampling weight (g)

f : Factor of 0.01N-NaOH

d : Dilution factor

(3) Tar color

It shall be tested according to 2.4. Coloring Agents in Article 9. General Testing Methods.

(4) Coliform group

It shall be tested according to 3.7 Coliform group, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Bacterial count

It shall be tested according to 3.5.1 Bacterial count, 3. Microbiological Methods in Article 9. General Testing Methods.

(6) *Salmonella* spp.

It shall be tested according to 3.11 *Salmonella* spp, 3. Microbiological Methods in Article 9. General Testing Methods.

(7) Enterohemmorrhagic *E. coli*

It shall be tested according to 3.16 Enterohemmorrhagic *E. coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

(8) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

12. Fish Meat Products

1) Definition

Fish meat products refer to fish cake, fish meat half-finished product, fish flesh, fish paste (surimi), etc. that are manufactured and processed using fish meat as its main material.

2) Requirements of Raw Material

(1) The raw materials shall be fresh.

(2) Fish shall be stored and handled at no more than 5˚C and frozen surimi should be stored and handled at no more than -18˚C in a sanitary manner.

(3) Raw materials should be handled in a sanitary manner after removing non-edible parts.

3) Manufacturing and Processing Standards

(1) Raw fish meat (except for frozen surimi) shall be sufficiently washed with running water which is appropriate for human consumption so that its blood, fat, water-soluble protein, etc. are removed.

(2) Any products intended for distribution and sale shall be sealed and packaged.

(3) Acid value and peroxide value of oil used for oil-frying and oil-treatment shall not be more than 2.5 and 50, respectively.

4) Food Types

(1) Fish cake

Fish cake refers to a product manufactured and processed by the addition of other foods to fish meat paste in which salt-soluble protein has been eluted.

(2) Fish sausage

Fish sausage refers to a product manufactured by curing and smoking fish meat or fish meat with meat or filling fish meat or fish meat with meat into casings and then heat-treated. (However, the amount of fish meat should be more than that of meat.)

(3) Half-finished fish meat product

Half-finished fish meat product refers to a product manufactured by the addition of other foods or food additives to fish meat paste in which salt-soluble protein has been eluted without heat treatment.

(4) Fish flesh

Fish flesh is a product manufactured by removing fish skin and bones and then processed in which food additives such as diluting agent and preservatives (excluding sorbic acid and potassium sorbate) have not been added.

(5) Fish meat paste

Fish meat paste refers is a product manufactured by removing fish skin and bones and then processed in which salt, sugar or phosphate has been added.

(6) Other processed fish meat products

Other processed fish products refer to processed fish meat products not specified in the above (1)~(5).

5) Specifications

(1) Nitrite Ion (g/kg) : Not more than 0.05 (Limited to fish sausage)

(2) Tar color : Shall not be detected (Excluding fish sausage)

(3) Coliform group : Shall be negative (Excluding non-heated products)

(4) Bacterial count : Shall be negative (Limited to sterilized products)

(5) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic Acid Potassium sorbate Calcium sorbate	Not more than 2.0(Based on Sorbic acid)

6) Test Methods

(1) Nitrite ion

It shall be tested according to 2.6 Color Fixing Agent in Article 9. General Testing Methods.

(2) Tar color

It shall be tested according to 2.4. Tar Color in Article 9. General Testing Methods.

(3) Coliform group

It shall be tested according to 3.7 Coliform Group 3. Microbiological Methods in Article 9. General Testing methods.

(4) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Preservatives

It shall be tested according to 2.1. Preservatives in Article 9. General Testing Methods.

13. Bean-curds or Starch Jellies (Mook)

1) Definition

Bean curds refer to products made by using pulses as the main material, solidifying soybean milk, and processing it. They include the bean curd, ground processed bean curd, yuba, and processed bean curd. Starch jelly (Mook) is a product manufactured by using starch or polysaccharides as the main material.

2) Requirements of Raw Material

(1) Through pretreatment process, soils, sands, straws and other foreign materials should be sufficiently removed from the raw materials.

(2) Soybean powder should be vacuum-packed, nitrogen-flushed after vacuum packing, or distributed and stored at cold temperature.

3) Manufacturing and Processing Standards

(1) It is recommended to pack the finished products.

(2) Unpacked bean curds should have the manufacturer's company name or trademark imprinted or otherwise identified in order to distinguish them from others made by other companies.

(3) Soy milk used in the manufacture of yuba should be subjected to heat treatment or other equivalent treatment.

(4) For the manufacture of bean curds, the seawater (including underground brine) may be used if it meets the class I requirements as specified in Annex 1-3-D-(1)/(2) of the Enforcement Decree of the Framework Act on Environment Policy

4) Food Types

(1) Bean curd

Bean Curd refers to a product made by adding coagulant to soybean solution obtained from soybean (including soy bean powder, 100%, but edible salt excluded).

(2) Ground processed bean curd

Ground processed bean curd refers to a product made by adding coagulant to soybean solution prepared by finely powdered soybean (including soy bean powder, 100%, but edible salt excluded).

(3) Yuba

Yuba refers to film obtained when heating soybean solution at a uniform temperature or processed film product.

(4) Processed bean curd

Processed bean curd refers to a product added with other foods when making bean curd/ground processed bean curd. Or it is made by processing a bean curd/ground processed bean curd by adding other foods or food additives. (However, bean curd or ground processed bean curd should be more than 30%).

(5) Starch jelly (Mook)

Jelly refers to a product made by processing starch, seaweeds or konjac as its main material.

5) Specifications

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

(2) Coliform group :

① Bean curd and ground processed bean curds : Not more than 10 per 1 g (Limited to filled, sealed products)

② Starchy jellies : Shall be negative (Limited to filled, sealed products)

(3) Tar color : Shall not be detected

6) Test Methods

(1) Heavy Metals

It shall be tested according to 7.1.2.8 Heavy Metals, 7. Methods for Harmful Substances in Food in Article 9. General Testing Methods.

(2) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General testing methods.

14. Edible Oils and Fats

1) Definition

Edible oils and fats refer to crude oil, obtained from plants (including crushed form) and animals containing oils and fats or using, or using it to manufacture and process products such as soybean oil, corn oil, canola oil, rice bran oil, sesame oil, perilla seed oil, safflower oil, sunflower oil, cottonseed oil, peanut oil, olive oil, palm oil, coconut oil, mixed oil, processed fat, shortening, margarine, hot pepper seed oil and flavored oil.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Crude oil collected through extraction or other processes shall go through degumming, deacidification, bleaching, deodorization, or other equivalent refining processes, or the combination thereof.

(2) Crude oil collected through mechanical compression or using carbon dioxide (supercritical extraction) shall go through stationing or filtration to remove any deposits.

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

(4) Other edible oil and fat shall not be mixed with sesame seed oil or perilla seed oil which is collected through mechanical compression or by using carbon dioxide (supercritical extraction).

(5) Solvents for extraction, carbon dioxide, sodium hydroxide, and others used in the manufacturing process for edible oils and fats shall meet the use standard of the Food Additive Code.

4) Food Types

(1) Soybean oil

Soybean oil refers to oil extracted from soybean which is processed to be edible.

(2) Corn oil

Corn oil refers to oil extracted from embryo bud of corn which is processed to be edible.

(3) Rapeseed oil (Canola oil)

Rapeseed oil refers to oil extracted from canola which is processed to be edible.

(4) Rice bran oil (Brown rice oil)

Rice bran oil refers to oil extracted from rice bran which is processed to be edible.

(5) Sesame seed oil

Sesame seed oil refers to oil obtained by mechanically compressing sesame seeds, by performing supercritical extraction using carbon dioxide, or by purifying crude oil extracted from sesame seeds.

(6) Perilla oil

Perilla oil refers to oil obtained by mechanically pressing perilla seeds, by performing supercritical extraction using carbon dioxide, or by purifying crude oil extracted from perilla seeds.

(7) Safflower oil

Safflower oil refers to oil extracted from safflower seed which is processed to be edible; it includes safflower oil and high oleic acid safflower seed oil.

(8) Sunflower oil

Sunflower oil refers to oil extracted from sunflower seed which is processed to be edible; it includes sunflower oil (including pressed sunflower oil) and high oleic acid sunflower oil.

(9) Cottonseed oil

Cottonseed oil refers to oil extracted from cottonseed which is processed to be edible; it includes cottonseed oil, cottonseed salad oil and cottonseed stearin oil.

(10) Peanut oil

Peanut oil refers to oil extracted from peanut which is processed to be edible; it includes peanut oil and refined peanut oil.

(11) Olive oil

Olive oil refers to pressed oil obtained by compressing and filtering olive fruits physically or mechanically; it includes refined olive oil, pressed olive oil and mixed olive oil of pressed olive oil and refined olive oil.

(12) Palm oil

Palm oil refers to oil extracted from palm, palm oleic oil or palm stearin oil from fractionation of palm oil and palm kernel oil from palm kernel.

(13) Coconut oil

Coconut oil refers to oil extracted from coconut flesh which is processed to be edible.

(14) Mixed oil

Mixed oil refers to oil made of simple blending of two or more oils which the food type has been determined by the Food Code (Excluding pressed sesame oil, pressed perilla oil and flavored oil).

(15) Processed fats and oils

Processed fats and oils refer to edible oil and fat of which physical and chemical properties are changed by hydrogenation, fractionation or ester exchange and refined to be edible.

(16) Shortening

Shortening refers to edible fat and oil added with additives to increase properties of plasticity and emulsification in solid or fluid status.

(17) Margarine

Margarine refers to solid or emulsified edible fat and oil (including milk fat) that is made of addition of water, food and additives. It includes margarine and low fat margarine (fat spread). (If milk fat is used as its raw material, the content should be less than 50%, based on weight proportion of fat content)

(18) Hot pepper seed oil

Hot pepper seed oil refers to oil extracted from hot pepper seed and processed to be edible; it includes pressed hot pepper seed oil and hot pepper seed oil.

(19) Flavored oil

Flavored oil refers to oil made by adding spices, flavoring, natural extracts, seasoning, or others into edible oil and fat (except pressed sesame seed oil, sesame seed oil extracted using supercritical extraction, pressed perilla seed oil, perilla seed oil extracted using supercritical extraction) (not less than 50% of edible oil and fat). It is used to give taste and flavor of food during cooking or processing.

(20) Other edible oils

Other edible oils refer to those made by processing crude oil from a single oil source to be suitable for human consumption or by collecting oil from the residuals after oil extraction through compression then processing it to be suitable for human consumption. However, those

for which standards and specifications are specified elsewhere in the Food Code shall be excluded.

5) Specifications

Type / Category	Soybean oil	Corn oil	Rapeseed Oil	Rice bran oil
(1) Acid value	Not more than 0.6	Not more than 0.6	Not more than 0.6	Not more than 0.6
(2) Iodine value	123 ~ 142	103 ~ 130	95 ~ 127	92 ~ 115

Type / Category	Sesame seed oil	Extracted sesame seed oil	Perilla seed oil	Extracted perilla seed 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) Antioxidants (g/kg)	-	-	Except the followings, any antioxidant shall not be detected.	
	-	-	Butylated hydroxyanisole Butylated hydroxytoluene tert-Butylhydroquinone	Not more than 0.2 (when used in combination, the total sum of Butylated hydroxyanisole Butylated hydroxytoluene 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 / Category	Safflower oil	High oleic acid safflower oil	Sunflower oil	High oleic acid sunflower oil
(1) Acid value	Not more than 0.6	Not more than 0.6	Not more than 0.6 (Not more than 4.0 for pressed sunflower oil)	Not more than 0.6
(2) Iodine value	140 ~ 150	80 ~ 100	120 ~ 142	75 ~ 88

Type / Category	Cottonseed oil	Cotton seed salad oil	Cottonseed stearin oil

(1) Acid value	Not more than 0.6	Not more than 0.6	Not more than 0.6
(2) Iodine value	102 ~ 120	105 ~ 123	83 ~ 105
(3) Cold test	-	Clear and transparent for 5 and half hours	-

Type / Category	Peanut oil	Refined peanut oil
(1) Acid value	Not more than 2.0	Not more than 0.6
(2) Iodine value	84 ~ 103	84 ~ 103
(3) Antioxidants (g/kg)	Except the following antioxidants, any antioxidant shall not be detected.	
	Butylated hydroxyanisole Butylated hydroxytoluene tert-Butylhydroquinone	Not more than 0.2 (when used in combination, the total sum of Butylated hydroxyanisole Butylated hydroxytoluene tert-Butylhydroquinone: shall not be more than 0.2)
	Propyl Gallate	Not more than 0.1

Type / Category	Pressed olive oil	Refined olive oil	Mixed olive oil
(1) Acid value	Not more than 2.0	Not more than 0.6	Not more than 2.0
(2) Iodine value	75 ~ 94	75 ~ 94	75 ~ 94

Type / Category	Palm oil	Palm oleic oil	Palm stearin oil	Palm kernel oil
(1) Acid value	Not more than 0.6	Not more than 0.6	Not more than 0.6	Not more than 0.6
(2) Peroxide value	-	Not more than 5.0	Not more than 3.0	-
(3) Iodine value	44 ~60	-	-	14 ~22

Type / Category	Coconut oil	Mixed oil	Processed fats & oils
(1) Acid value	Not more than 0.6	Not more than 0.6	Not more than 0.6
(2) Peroxide value	-	-	Not more than 3.0
(3) Iodine value	7 ~ 11	-	-
(4)Antioxidants (g/kg)	-	Except the following antioxidants, any antioxidants shall not be detected.	
		Butylated hydroxyanisole Butylated hydroxytoluene	Not more than 0.2(when used in combination, the total sum of Butylated hydroxyanisole Butylated hydroxytoluene tert-

		tert-Butylhydroquinone	Butylhydroquinone: shall not be more than 0.2)
		Propyl Gallate	Not more than 0.1

Type / Category	Shortening	Margarine	Low fat margarine (fat spread)
(1) Crude fat (%)	-	Not less than 80.0	Not less than 10.0 ~ Not less than 80.0
(2) Acid value	Not more than 0.8 (using emulsifiers such as lecithin and glycerin esters of fatty acids for industrial or restaurants use, and not for retail sale shall be excluded.)	Not more than 1.0 (using milk fat, lecithin or glycerin esters of fatty acids shall be excluded)	Not more than 1.0 (using milk fat, lecithin or glycerin esters of fatty acids shall be excluded)
(3) Tar color	-	Shall not be detected	Shall not be detected
(4) Antioxidant(g/kg)	Except the followings, any antioxidant shall not be detected.		
	Butylated hydroxyanisole Butylated hydroxytoluene tert-Butylhydroquinone	Not more than 0.2(when used in combination, the total sum of Butylated hydroxyanisole Butylated hydroxytoluene 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 amount used as Disodium Ethylenediaminetetraacetate anhydrous shall not be more than 0.1 g/kg)
(5) Preservatives (g/kg)		Except the following preservatives, any preservative shall not be detected.	
		Dehydroacetic acid Sodium dehydroacetate	Not more than 0.5 (as dehydroacetic acid)
		Benzoic acid, Sodium benzoate, Potassium benzoate, Calcium benzoate	Not more than 1.0 (as benzoic acid)
		Sorbic acid, Potassium sorbat, Calcium sorbate	Not more than 1.0 [sorbic acid; in case of low fat margarine (fat spread), Not more than 2.0]
		When the above	Not more than 1.0 [the sum of

		preservatives(benzoic acids and sorbic acids) are used in combination	benzoic acid and sorbic acid; for low-fat margarine (fat spread), the sum of benzoic acid and sorbic acid shall be not more than 2.0 and the content of benzoic acid shall not be more than 1.0]

Type / Category	Pressed hot pepper seed oil	Hot pepper seed oil	Flavored oil
(1) Acid value	Not more than 3.0	Not more than 0.6	Not more than 3.0
(2) Iodine value	120 ~ 139	120 ~ 139	-
(3) Tar color	-	-	Shall not be detected

Type / Category	Other edible fats and oils	
(1) Acid value	Not more than 0.6 (Not more than 4.0 for pressed oil)	
(2)Antioxidant (g/kg)	Except the followings, any antioxidant shall not be detected.	
	Butylated hydroxyanisole Butylated hydroxytoluene tert-Butylhydroquinone	Not more than 0.2 (when being used in combination , the total sum of Butylated hydroxyanisole Butylated hydroxytoluene tert-Butylhydroquinone: shall not be more than 0.2)
	Propyl Gallate	Not more than 0.1

6) Test Methods

(1) Acid value

It shall be tested according to 1.1.5.3.1 Acid Value, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Iodine value (Wijs' method)

It shall be tested according to 1.1.5.3.3 Iodine Value, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Cold test

Put a sample into a beaker, heat it at 120~130˚C for 5 minutes and cool it down approximately to 25˚C. Fill it about 80~90% to a flat bottom bottle (100~120 mL volume; 50 mm diameter),

plug it, wrap the stopper with cellophane paper and fix it with a rubber band. And then, fill crushed ices in a water container or beaker (2~3 L volume), until ices almost cover the flat bottom bottle, put cold water of 0˚C to maintain the temperature of bottle at 0˚C. After a certain time elapses, observe whether the bottle is clear and transparent.

(4) Crude fat

1~1.5 g of sample is weighed accurately, put it in to a 50 mL beaker, insert a separatory funnel that is washed with ether, add sodium sulfate anhydrous to dehydrate it and filter it in a 250 mL Erlenmyer flask to volatilize ether. Dry it out at 105˚C for 20 minutes or longer until it is constantly weighed, which is used to obtain the amount of crude fat.

(5) Antioxidant

It shall be tested according to 2.3 Antioxidant in Article 9. General Testing Methods.

(6) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(7) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

(8) Peroxide value

It shall be tested according to 1.1.5.3.5 Peroxide Value, 1. Food Component Methods in Article 9. General Testing Methods.

(9) Linolenic acid

It shall be tested according to 1.1.5.4 Fatty Acid Test, 1. Food Component Methods in Article 9. General Testing Methods.

(10) Erucic acid

It shall be tested according to 1.1.5.4 Fatty Acid Test, 1. Food Component Methods in Article 9. General Testing Methods.

15. Noodles

1) Definition

Noodles refer to products made of cereals or starches as main raw materials by molding, heat-treating, drying and others, which include noodles, naengmyeon(cold noodle), dangmyeon(Chinese noodle), oil-fried noodles, pastas, and other noodles.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) For alcohol-treated products (no less than 1% of alcohol used), alcohol treatment should be performed in a manner that any residual alcohol does not adversely affect the quality.

4) Food Types

(1) Noodle

Noodle refers to a product manufactured by using grain flour, starch, starch source or modified starch as a main material.

(2) Naengmyeon (cold noodle)

Naengmyeon (cold noodle) refers to a product manufactured by using the buckwheat flour, grain flour, or starch as a main material which is molded through extruding, rolling or similar manner.

(3) Dangmyeon (Cellophane noodle)

Dangmyeon refers to a product manufactured by using starch (no less than 80%) as a main material.

(4) Oil-fried noodle

Oil-fried noodle refers to a product manufactured by cooking the noodles and frying them with oil.

(5) Pasta

Pasta refers to a product manufactured by using durum semolina, durum flour, parana, wheat flour or rice flour as a main material. It includes the macaroni and spaghetti.

(6) Other Noodles

Other noodles refer to those products not specified in the above (1)~(5) and includes sujebi (clear soup with dumplings) and dumpling skin.

5) Specifications

(1) Tar color : Shall not be detected

(2) Preservatives : Shall not be detected

(3) Bacterial counts : Not more than 1,000,000 per 1 g (Limited to alcohol-treated products)

Not more than 100,000 per 1 g (Limited to pasteurized products)

(4) *Escherichia coli* : Negative (Limited to alcohol-treated products)

(5) Coliform group : Negative (Limited to pasteurized products)

6) Test Methods

(1) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(2) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

(3) Bacterial count

Wipe the surface of container/packing of sample with cotton soaked with 70% alcohol, open it using a sterilized device, chop the content in small pieces, take 10 g randomly, put it into a homogenizer sterilely and homogenize it by adding 90 mL sterilized phosphate buffered dilution water or sterilized saline. Use the resulting mixture as the sample and test it according to 3.5.1 General Bacterial Count 3. Microbiological Methods in Article 9. General Testing Methods.

(4) *Escherichia coli*

Using the sample from above (3), test it according to 1) Limitation Test, 3.8.1 Qualitative Test, 3.8 *Escherichia coli,* 3. Microbiological Method in Article 9. General Testing Methods.

(5) Coliform group

Using the sample from above (3), test it according to 다. Desoxycholate Lactose Agar Method, 3.7.1 Quantitative Test, 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

16. Teas

1) Definition

Teas refer to the types of palatable food made of plant-derived materials and include leached tea (infused tea), liquid tea, and solid tea.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Depending on the nature of raw materials, the cold infusion, warm infusion, or other appropriate infusion methods shall be used in extraction process. For this purpose, water, alcohol, or carbon dioxide may be used.

(2) Ssanghwa tea (herb tonic tea) shall be manufactured by using the soluble extracts of baekjakyak (*Paeonia lactiflora* Pall.), sukjihwang (*Rehmannia glutinosa*), hedysarum (*Astragalus membranaceus* Bunge), dangui (*Angelica gigas* N.), cheongung (*Cnidium officinale* Makino), cinnamon, and licorice after filtration. In addition, ginger, jujube, pine nuts, or others may be added.

4) Food Types

(1) Leached tea (infused tea)

Leached tea (infused tea) refers to a palatable food which is processed by leaching spouts, leaves, flowers, stems, roots and fruits or grains in water and it is consumed by drinking the filtrate.

(2) Liquid tea

Liquid tea refers to a syrup or liquid form of palatable food processed by treating the plant-derived raw materials through extraction or other methods (extracted solution, concentrated solution, or powder) or by adding other food or food additives to it.

(3) Solid tea

Solid tea refers to a powder or other solid form of palatable food processed by using the plant-derived raw material as a main material.

5) Specifications

(1) Tar color : Shall not be detected

(2) Lead (mg/kg) : Not more than 5.0 for leached tea, Not more than 0.3 for liquid tea, not more than 2.0 for solid tea

(3) Cadmium (mg/kg) : Not more than 0.1 (Limited to liquid tea)

(4) Tin (mg/kg) : Not more than 150 (Limited to liquid canned products except for aluminum cans)

(5) Bacterial count : Not more than 100 per 1 mL(Limited liquid products)

(6) Coliform group : Shall be negative (Limited liquid products)

6) Test Methods

(1) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(2) Lead

It shall be tested according to 7.1. Methods for Heavy Metals in Article 9. General Testing Methods.

(3) Cadmium

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(4) Tin

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(5) Bacterial count

It shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

17. Coffees

1) Definition

Coffees refer to processed coffee beans or that added with foods or food additives, such as roasted coffee (roasted coffee bean or that is grinded), instant coffee (dried form of soluble extract of coffee), formulated coffee and liquid coffee.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Water, alcohol, or carbon dioxide shall be used for the extraction of coffee beans.

4) Food Types

5) Specifications

(1) Lead (mg/kg) : Not more than 2.0

(2) Tin (mg/kg) : Not more than 150 (Limited to liquid canned products except for aluminum can)

(3) Tar color : Shall not be detected

(4) Bacterial count : Not more than 100 per 1 mL(Limited to liquid products).

(5) Coliform group : Shall be negative (Limited to liquid products)

6) Test Methods

(1) Lead

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(2) Tin

It shall be tested according to 7.1. Methods for Heavy Metals in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(4) Bacterial count

It shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Coliform group

It is tested according to 다. Desoxycholate Lactose Agar Method, 3.7.1. Quantitative Test, 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

18. Beverages

Beverages refer to food for the purpose of drinking including fruit · vegetable beverages, carbonated beverages, soymilks, fermented beverages, ginseng · red ginseng beverages, and other beverages (Excluding alcoholic drinks, teas, drinks containing no less than 4% of non-fat soluble solid content).

18-1 Fruit · vegetable Beverages

1) Definition

Fruit · vegetable beverages refer to products made by processing fruits or vegetables to be drank directly or through dilution. They include concentrated fruit · vegetable juice, fruit · vegetable juice and fruit · vegetable beverages.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

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

(2) For unheated fruit or vegetable juice, foods or food additives other than the relevant fruits or vegetables shall not be used.

4) Food Types

(1) Concentrated fruit · vegetable juice (or powdered fruit · vegetable)

Concentrated fruit and vegetable juice refers to fruit juice, vegetable juice, and the mixture of fruit and vegetables juices which are concentrated to not more than 50% or the powdered form of them. (Excludes those to be used as raw materials)

(2) Fruit · vegetable juice

Fruit and vegetable juice refers to a product obtained from physical treatment such as compression, grinding, or extraction of fruits or vegetables (including the concentrated fruit · vegetable juice, fruit · vegetable juice or fruit powder, vegetable powder, fruit · vegetable juice reconstituted from fruit · vegetable powder, or fruit · vegetable puree . paste) or others made by adding foods or food additives to such juice (not less than 95% of fruit · vegetable juice).

(3) Fruit · vegetable beverage

Fruit · vegetable beverage refers to a product made by processing the concentrated fruit · vegetable juice (or powder) or fruit · vegetable juice (not less than 10% of fruit juice, vegetable juice, or fruit · vegetable juice).

5) Specifications

(1) Lead (mg/kg) : Not more than 0.3

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

(3) Tin (mg/kg) : Not more than 150 (Limited to canned products except for aluminum can)

(4) Bacterial count： Not more than 100 per 1 mL (Not more than 100,000 in case of non-heated products or products containing non-heated ingredients)

(5) Coliform group : Shall be negative (Excluding non-heated products or products containing non-heated ingredients)

(6) Enterohemmorrhagic *E. coli* : n=5, c=0, m=0/25 g (Limited to non-heated products or products containing non-heated ingredients).

(7) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Benzoic acid Sodium benzoate Potassium benzoate Calcium benzoate	Not more than 0.6 (However, for concentrate fruit juice, if it is used in combination with sorbic acid, sodium sorbate and calcium sorbate, the total amount used as sorbic aicd should not be more than 1.0g/kg. Among these, the amount used as benzoic acid should not be more than 0.6g/kg. Also, it should not be detected in non-heat treated products)
Sorbic acid Potassium sorbate Calcium sorbate	Not more than 1.0 (It is limited to concentrated fruit juices and if it is used in combination with benzoic acid, sodium benzoate, Potassium benzoate and calcium benzoate, the total amount used as sorbic acid and as benzoic acid should not be more than 1.0g/kg. Among these, the amount used as benzoic acid should not be more than 0.6g/kg)

6) Test Methods

(1) Lead and cadmium

① Preparation of test solution

Prepare a 100 g sample (50 g if dry ashing method) [The amount divided from 100 g (or 50 g if dry ashing method) by a dilution factor for the beverages to be drank after dilution and by a concentration factor for the concentrated raw fruit juice] and follow 7.1.2.1 1) Preparation of Test Solution, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

② Test operation

It shall be tested according to 7.1.2.1 2) Measurement, 7.1. Methods for Heavy Metals in Article 9. General Testing Methods.

(2) Tin

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(3) Bacterial count

Take a sample as packaged in a casing, wash the surface, dry it out naturally, wipe the stopper and bottom up to 5 ~ 10 with cotton containing 70% alcohol, sterilize it with flame, cool it down in a clean bench, open, unseal or release it with a sterilized tool, transfer the content to another sterile container, stir it, take it as the test solution and it shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods. In case of soft drinks containing carbonic acid, transfer the content to another sterilized container, stir it for 5 minutes to volatilize carbon dioxide and it is used as test solution.

(4) Coliform group

Using the sample prepared for Bacterial Count above, it shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Enterohemmorrhagic *E. coli*

Using the sample prepared for Bacterial Count above, it shall be tested according to 3.26 Enterohemmorrhagic *E. coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

(6) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

18-2 Carbonated Beverages

1) Definition

Carbonated beverages refer to carbonated beverages and carbonated water containing carbon dioxide.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Carbonated beverage

Carbonated beverage refers to a product made by mixing food or food additives with carbon dioxide in drinking water or by adding food or food additives in carbonated water.

(2) Carbonated water

Carbonated water refers to water naturally containing carbon dioxide or water made by adding carbon dioxide to drinking water.

5) Specifications

(1) Pressure of carbon dioxide gas (kg/cm^2)

① Carbonated water : Not less than 1.0

② Carbonated beverage : 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 (Limited to canned products except aluminum can)

(5) Bacterial count：Not more than 100 per 1 mL

(6) Coliform group：Shall be negative

(7) Preservatives (g/kg)：Shall not be detected except those specified in the followings.

Benzoic acid Sodium benzoate Potassium benzoate Calcium benzoate	Not more than 0.6 (As benzoic acid. However, it shall not be detected in carbonated water)

6) Test Methods

(1) Gas pressure

Put a sample in a constant temperature water bath of 15~20˚C for half an hour ~ an hour, take it out quietly, attach it on the stopper of a CO_2 Volume Tester, lock the sniffle valve(a valve used to discharge gas inside a bottle) and push it to punch it with a fixed pin. At this time, an indicator on the device shows the pressure but it actually does not indicate the accurate pressure in the bottle, so it needs opening sniffle valve to discharge gas and locking it as soon as the indicator is on '0' and then, it should be recorded when the device shows the maximum pressure(the indicator is fixed on a certain position) after shaking it. Then open the valve to discharge gas and measure the temperature of beverage by opening its stopper.

If the measured temperature is other than 20˚C, compensate it according to the following table of absorption coefficient of carbonic acid gas. Temperature is recoded up to one decimal places and gas pressure is recorded up to two decimal places.

[Test Precautions]

① Gas should not be leaked from rubber stopper or valves.

② If the container for sample is made of glass material, it should be covered with cloth to avoid any breakage.

③ A thermometer should be inspected for its accuracy by comparing it with the standard thermometer and when measuring the temperature, it should be inserted into the beverage bottle to restrict any rise in temperature.

④ CO_2 Volume Tester should be frequently inspected by Dead Weight Gauge Tester to obtain the compensation values.

(2) Lead and cadmium

It shall be tested according to (1) Lead and Cadmium, 6) Test Methods in 18-1 Fruit · Vegetable Beverages.

(3) Tin

It shall be tested according to (3) Tin, 6) Test Methods in 6) Test Methods in 18-1 Fruit · Vegetable Beverages.

(4) Bacterial count

It shall be tested according to (4) Bacterial count, 6) Test Methods in 18-1 Fruit · Vegetable Beverages.

(5) Coliform group

It shall be tested according to (5) Coliform Group, 6) Test Methods in 18-1 Fruit · Vegetable Beverages.

(6) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

Calculation Table of Carbon Dioxide Gas Absorption (1)

kg/cm^2	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Lb/m^2 / ˚C		1.4	2.8	4.3	5.7	7.1	8.5	10.0	11.4	12.8
0	1.713	1.88	2.04	2.21	2.38	2.54	2.71	2.87	3.04	3.37
1	1.646	1.81	1.96	2.12	2.28	2.44	2.60	2.76	2.92	3.08
2	1.584	1.74	1.89	2.04	2.20	2.35	2.50	2.66	2.81	2.96
3	1.527	1.67	1.82	1.97	2.12	2.27	2.41	2.56	2.71	2.86
4	1.473	1.62	1.76	1.90	2.04	2.19	2.33	2.47	2.61	2.76
5	1.424	1.56	1.70	1.84	1.98	2.11	2.25	2.39	2.53	2.66
6	1.377	1.51	1.64	1.78	1.91	2.04	2.18	2.31	2.44	2.58
7	1.331	1.46	1.59	1.72	1.85	1.98	2.10	2.23	2.36	2.49
8	1.282	1.41	1.53	1.65	1.78	1.90	2.03	2.15	2.27	2.40
9	1.237	1.36	1.48	1.60	1.72	1.84	1.96	2.08	2.19	2.31
10	1.194	1.31	1.43	1.54	1.66	1.77	1.89	2.00	2.12	2.23
11	1.154	1.27	1.38	1.49	1.60	1.71	1.82	1.94	2.05	2.16
12	1.117	1.23	1.33	1.44	1.55	1.66	1.77	1.87	1.98	2.09
13	1.083	1.19	1.29	1.40	1.50	1.61	1.71	1.82	1.92	2.03
14	1.050	1.15	1.25	1.35	1.46	1.56	1.66	1.76	1.88	1.96
15	1.019	1.12	1.22	1.31	1.41	1.51	1.61	1.71	1.81	1.91
16	0.985	1.08	1.18	1.27	1.37	1.46	1.56	1.65	1.75	1.84
17	0.956	1.05	1.14	1.23	1.33	1.42	1.51	1.60	1.70	1.79
18	0.928	1.02	1.11	1.20	1.29	1.38	1.47	1.56	1.65	1.74
19	0.902	0.99	1.08	1.16	1.25	1.34	1.43	1.51	1.60	1.69
20	0.878	0.96	1.05	1.13	1.22	1.30	1.39	1.47	1.56	1.64
21	0.854			1.10	1.18	1.27	1.35	1.43	1.52	1.60
22	0.829				1.15	1.23	1.31	1.39	1.47	1.55
23	0.804					1.19	1.27	1.35	1.43	1.50
24	0.781						1.23	1.31	1.39	1.46
25	0.759							1.27	1.35	1.42

Calculation Table of Carbon Dioxide Gas Absorption (2)

kg/cm^2	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
Lb/m^2 / ˚C	14.2	15.6	17.1	18.5	19.9	21.3	22.8	24.2	25.6	27.0
0	3.37	3.54	3.70	3.87	4.03	4.20	4.37	4.53	4.70	4.86
1	3.24	3.40	3.56	3.72	3.88	4.04	4.19	4.35	4.511	4.67
2	3.12	3.27	3.42	3.58	3.73	3.88	4.04	4.19	4.34	4.50
3	3.00	3.15	3.30	3.45	3.60	3.74	3.89	4.04	4.19	4.33
4	2.90	3.04	3.18	3.33	3.47	3.61	3.75	3.90	4.04	4.18
5	2.80	2.94	3.08	3.22	3.35	3.49	3.63	3.77	3.90	4.04
6	2.71	2.84	2.98	3.11	3.24	3.38	3.51	3.64	3.78	3.91
7	2.62	2.75	2.88	3.01	3.13	3.26	3.39	3.52	3.65	3.78
8	2.52	2.65	2.77	2.90	3.02	3.14	3.27	3.39	3.52	3.64
9	2.43	2.55	2.67	2.79	2.91	3.03	3.15	3.27	3.39	3.51
10	2.35	2.47	2.58	2.70	2.81	2.93	3.04	3.16	3.27	3.39
11	2.27	2.38	2.49	2.61	2.72	2.83	2.94	3.05	3.16	3.28
12	2.20	2.31	2.41	2.52	2.63	2.74	2.85	2.95	3.06	3.17
13	2.13	2.24	2.34	2.45	2.55	2.66	2.76	2.86	2.97	3.07
14	2.07	2.17	2.27	2.37	2.47	2.57	2.68	2.78	2.88	2.98
15	2.01	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.79	2.89
16	1.94	2.03	2.13	2.22	2.32	2.41	2.51	2.61	2.70	2.80
17	1.88	1.97	2.07	2.16	2.25	2.34	2.44	2.53	2.62	2.71
18	1.83	1.92	2.01	2.10	2.19	2.28	2.37	2.45	2.54	2.63
19	1.77	1.86	1.95	2.04	2.12	2.21	2.30	2.39	2.47	2.56
20	1.73	1.81	1.90	1.98	2.07	2.15	2.24	2.32	2.41	2.49
21	1.68	1.76	1.85	1.93	2.01	2.09	2.18	2.26	2.34	2.42
22	1.63	1.71	1.79	1.87	1.95	2.03	2.11	2.19	2.27	2.35
23	1.58	1.66	1.74	1.82	1.89	1.97	2.05	2.13	2.20	2.28
24	1.54	1.61	1.69	1.76	1.84	1.91	1.99	2.07	2.14	2.22
25	1.49	1.57	1.64	1.71	1.79	1.86	1.93	2.01	2.08	2.15

Reading the table of absorption coefficient of carbonic acid gas：'Absorption coefficient' indicates gas volume. When the table is used as a pressure compensation table inside bottle; For instance, a bottle's pressure is 2.5 kg/cm^2 at 22˚C (liquid temp.), its gas volume, 2.83 can be found on a cross point of 2.5 line and 22˚C line. To reset it as the standard temperature at 20˚C, go to the number on a column, 2.83 on 20˚C line and take the number on the top, 2.3 kg/cm^2 as the pressure inside a bottle at 20˚C.

Calculation Table of Carbon Dioxide Gas Absorption (3)

kg/cm^2	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0
Lb/m^2 / ˚C	28.4	29.9	31.3	32.7	44.1	35.6	37.6	38.4	39.8	41.2	42.7
0	5.03	5.19	3.36	5.53	5.69	5.86	6.02				
1	4.83	4.99	5.15	5.31	5.47	5.63	5.79	5.95	6.11		
2	4.65	4.80	4.96	5.11	5.26	5.42	5.57	5.72	5.86	6.03	
3	4.48	4.63	4.78	4.93	5.07	5.22	5.37	5.52	5.67	5.81	5.96
4	4.32	4.47	4.61	4.75	4.89	5.04	5.18	5.32	5.46	5.61	5.75
5	4.18	4.32	4.46	4.59	4.73	4.87	5.01	5.15	5.28	5.42	5.56
6	4.04	4.18	4.31	4.44	4.58	4.71	4.48	4.98	5.11	5.24	5.38
7	3.91	4.04	4.17	4.29	4.42	4.55	4.68	4.81	4.94	5.07	5.20
8	2.76	3.89	4.01	4.14	4.26	4.38	4.51	4.63	4.76	4.88	5.00
9	3.63	3.75	3.87	3.99	4.11	4.23	4.35	4.47	4.59	4.71	4.83
10	3.51	3.62	3.74	3.85	3.97	4.08	4.20	4.31	4.43	4.55	4.66
11	3.39	3.50	3.61	3.72	3.83	3.95	4.06	4.17	4.28	4.39	4.50
12	3.28	3.39	3.50	3.60	3.71	3.82	3.93	4.04	4.14	4.25	4.36
13	3.18	3.28	3.39	3.49	3.60	3.70	3.81	3.91	4.02	4.12	4.23
14	3.08	3.18	3.29	3.39	3.49	3.59	3.69	3.79	3.90	4.00	4.10
15	2.99	3.09	3.19	3.29	3.39	3.48	3.58	3.68	3.78	3.83	3.98
16	2.89	2.99	3.08	3.18	3.27	3.37	3.46	3.56	3.65	3.75	3.84
17	2.81	2.90	2.99	3.08	3.18	3.27	3.36	3.45	3.55	3.64	3.73
18	2.72	2.81	2.90	2.99	3.08	3.17	3.26	3.35	3.44	3.53	3.62
19	2.65	2.74	2.82	2.91	3.00	3.08	3.17	3.26	3.35	3.43	3.52
20	2.58	2.66	2.75	2.83	2.92	3.00	3.09	3.17	3.26	3.34	3.43
21	2.51	2.59	2.67	2.76	2.84	2.92	3.00	3.09	3.17	3.25	3.33
22	2.43	2.51	2.59	2.67	2.75	2.83	2.92	3.00	3.08	3.16	3.24
23	2.36	2.44	2.52	2.59	2.67	2.75	2.83	2.90	2.98	2.06	3.14
24	2.29	2.37	2.44	2.52	2.60	2.67	2.75	2.89	2.90	2.97	3.05
25	2.23	2.30	2.38	2.45	2.52	2.60	2.67	2.74	2.82	2.89	2.96

Calculation Table of Carbon Dioxide Gas Absorption (4)

kg/cm^2	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
Lb/m^2 / ˚C	44.1	45.5	46.9	48.4	49.8	51.2	52.6	54.0	55.5	56.9
0										
1										
2										
3	6.11									
4	5.89	6.04	6.18							
5	5.70	5.83	5.97	6.11						
6	5.51	5.64	5.77	5.91	6.04	6.17				
7	5.32	5.45	5.58	5.71	5.84	5.97	6.10	6.23		
8	5.13	5.25	5.38	5.50	5.62	5.75	5.87	6.00	6.12	
9	4.95	5.07	5.19	5.31	5.43	5.55	5.67	5.79	5.91	6.03
10	4.78	4.89	5.01	5.12	4.24	5.35	5.47	5.59	5.70	5.82
11	4.62	4.73	4.84	4.95	4.06	5.17	5.29	5.40	5.51	5.62
12	4.47	4.58	4.68	4.79	4.90	5.01	5.12	5.23	5.33	5.44
13	4.33	4.44	4.54	4.65	4.75	4.86	4.96	5.07	5.17	5.28
14	4.20	4.30	4.40	4.51	4.61	4.71	4.81	4.91	5.01	5.11
15	4.08	4.17	4.27	4.37	4.47	4.57	4.67	4.77	4.87	4.96
16	3.94	4.04	4.13	4.23	4.32	4.42	4.51	4.61	4.70	4.80
17	3.82	3.02	4.01	4.10	4.19	4.29	4.38	4.47	4.56	4.66
18	3.71	3.80	3.89	3.98	4.07	4.16	4.25	4.34	4.43	4.52
19	3.61	3.70	3.78	3.87	3.96	4.04	4.13	4.22	4.31	4.39
20	3.51	3.60	3.68	3.77	3.85	3.94	4.02	4.11	4.19	4.28
21	3.42	3.50	3.58	3.66	3.75	3.83	3.91	3.99	4.08	4.16
22	3.32	3.40	3.48	3.56	3.64	3.72	3.80	3.88	3.96	4.04
23	3.22	3.29	3.37	3.45	3.53	3.61	3.68	3.76	3.84	3.92
24	3.12	3.20	3.28	3.35	3.43	3.50	3.58	3.65	3.74	3.80
25	3.04	3.11	3.18	3.26	3.33	3.40	3.48	3.55	3.62	3.70

Calculation Table of Carbon Dioxide Gas Absorption (5)

kg/cm^2	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
Lb/m^2 / ˚C	58.3	59.7	61.2	62.6	64.0	65.4	66.8	68.3	69.7	71.1
0										
1										
2										
3										
4										
5										
6										
7										
8										
9	6.15									
10	5.93	6.05								
11	5.73	5.84	5.95	6.07	6.18	6.29	6.40			
12	5.55	5.66	5.77	5.87	5.98	6.09	6.20	6.31	6.41	6.52
13	5.38	5.49	5.59	5.69	5.80	5.90	6.01	6.11	6.22	6.32
14	5.22	5.32	5.42	5.52	5.62	5.72	5.83	5.93	6.03	6.13
15	5.06	5.16	5.26	5.36	5.46	5.56	5.65	5.75	5.85	5.95
16	4.89	4.99	5.08	5.18	5.27	5.37	5.47	5.56	5.66	5.75
17	4.75	4.84	4.93	5.03	5.12	5.21	5.30	5.40	5.49	5.58
18	4.61	4.70	4.79	4.88	4.97	5.06	5.15	5.24	5.33	5.42
19	4.48	4.57	4.66	4.74	4.83	4.92	5.01	5.09	5.18	5.27
20	4.36	4.45	4.53	4.62	4.70	4.79	4.87	4.96	5.04	5.13
21	4.24	4.33	4.41	4.49	4.57	4.66	4.74	4.82	4.90	4.99
22	4.12	4.20	4.28	4.36	4.44	4.52	4.60	4.68	4.76	4.84
23	3.99	4.07	4.15	4.23	4.31	4.38	4.46	4.54	4.62	4.69
24	3.88	3.96	4.03	4.11	4.18	4.26	4.33	4.41	4.48	4.56
25	3.77	3.84	3.92	3.99	4.06	4.14	4.21	4.29	4.36	4.43

18-3 Soymilks

1) Definition

Soymilks refer to extract of soybean or processed soybean or products manufactured and processed after adding other foods and food additives to it. They include soybean-based liquid, soymilk, powdered soymilk, etc.

2) Requirements of Raw Material

(1) Soybeans shall be subjected to pre-treatment process to sufficiently remove the impurities, soil, sands, straws, or others.

3) Manufacturing and Processing Standards

(1) If soybeans are used directly, sufficient heating shall be conducted to inactivate any quality deteriorating agents.

(2) Finished products shall be subjected to sterilization or pasteurization processes. pasteurized products shall be cooled down to no more than 10˚C after the pasteurization process (except the pasteurized products with pH 4.5 or less).

4) Food Types

(1) Soybean-based Liquid

Soybean-based Liquid refers to liquid extract from soybean (7% or more of solid soybean content).

(2) Soymilk

Soymilk refers to products made by adding foods or additives to soybean-based liquid or processed soybean product (4% or more of solid soybean content).

(3) Powdered Soymilk

Powdered soymilk refers to dried and powdered soymilk or formulated soymilk products (50% or more of solid soybean content).

(4) Other Soymilk

Other soymilk refers to liquefied, gelled or gelatinized products processed by adding fruit · vegetable juice(including fruit puree) or milk, processed milk products and ground grain (1.4% or more of solid soybean content).

5) Specifications

Type / Category	Soybean-based liquid · Soymilk	Powdered Soymilk	Other Soymilk
(1) Bacterial count	Not more than 40,000 per 1 mL (Shall be negative for sterilized products or pasteurized products with the pH 4.5 or less)	Not more than 20,000 per 1g (Shall be negative for sterilized products)	Not more than 40,000 per 1 mL (Shall be negative for sterilized products or pasteurized products with the pH than 4.5 or less)
(2) Coliform group	Not more than 10 per 1 mL (Shall be negative for sterilized products or pasteurized products with the pH 4.5 or less)	Not more than 10 per 1g (Shall be negative for sterilized products)	Not more than 10 per 1 mL (Shall be negative for sterilized products or pasteurized products with the pH 4.5 or less)

6) Test Methods

(1) Bacterial count

It shall be tested according to 3.5.1 General bacterial count, 3. Microbiological Methods in Article 9. General Testing Methods.

(2) Coliform group

It shall be tested according to 나. Desoxycholate Lactose Agar Method, 3.7.2 Quantitative Test, 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

18-4 Fermented Beverages

1) Definition

Fermented beverages refer to beverages made by fermenting milk products or vegetable raw materials with microorganisms, such as lactic acid bacteria and yeasts, and processing them (However, they refer to the products be applicable to the processing standards and component specifications for animal products).

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Lactobacillus beverage

Lactobacillus beverage refers to a drink processed by fermenting milk products or vegetable substances (including pasteurization process) with lactobacillus.

(2) Yeast beverage

Yeast drink refers to a drink processed by fermenting milk products or vegetable substances (including pasteurization process) with yeasts.

(3) Other fermented beverage

Other fermented beverage refers to a drink processed by fermenting milk products or vegetable substances (including pasteurization process) with microorganisms, etc.

5) Specifications

(1) Lactobacillus count or yeast count : Not less than 1,000,000 per 1 mL (Limited to lactobacillius, yeast beverages; excluding pasteurized products)

(2) Bacterial count: Not more than 100 per 1 mL (Limited to pasteurized products)

(3) Coliform group : Shall be negative

(4) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic Acid Potassium Sorbate Calcium sorbate	Not more than 0.05 (as sorbic acid; However, shall not be detected in case of pasteurized products)

6) Test Methods

(1) Lactobacillus count or yeast count

It shell be tested according to 3.9 Lactobacillus Count or 3.10 Fungal Count (the number of yeast and mold), 3. Microbiological Methods in Article 9. General Testing Methods.

(2) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Coliform group

It shall be tested according to 나. Desoxycholate Lactose Agar Method, 3.7.2 Quantitative test, 3.7. Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(4) Preservatives

It shall be tested according to 2.1 Preservatives Article in 9. General Testing Methods.

18-5 Ginseng · Red Ginseng Beverages

1) Definition

Ginseng · red ginseng beverages refer to directly drinkable beverages produced by adding foods or additives to ginseng · red ginseng or soluble ingredients of ginseng · red ginseng

2) Requirements of Raw Material

(1) Fresh ginseng used directly for ginseng · red ginseng beverages shall be at least 3 years of age and any damaged or diseased ginseng shall not be used.

(2) Dried young ginseng (chunmisam), ginseng skin (sampi), and ginseng cake shall not be used and, for the diseased ginseng, it may be used only after removal of the diseased parts.

3) Manufacturing and Processing Standards

(1) Any suspended material derived from ginseng and red ginseng shall be removed when manufacturing the ginseng/red ginseng beverages.

(2) Should contain not less than 0.15% of soluble ginseng/red ginseng ingredient (Based on 80 mg/g ginseng saponin, or based on 70 mg/g red ginseng saponin) or should contain at least one ginseng or red ginseng of 3 years of older.

4) Food Types

5) Specifications

(1) Ginseng · red ginseng component : Shall be verified

(2) Tar color : Shall not be detected

(3) Lead (mg/kg) : Not more than 0.3

(4) Tin (mg/kg) : Not more than 150 (Limited to canned products except aluminum can)

(5) Bacterial count : Not more than 100 per 1 mL

(6) Coliform group: Shall be negative

(7) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Benzoic Acid Sodium benzoate Potassium benzoate Calcium benzoate	Not more than 0.6 (as benzoic acid)
Methyl p-hydroxy-benzoate	Not more than 0.1 (as p-hydroxybenzoate)

Ethyl p-hydroxy-benzoate	

6) Test Methods

(1) Ginseng · red Ginseng ingredient

Put 60 mL of sample into a separatory funnel, extract ether to remove impurities and it is tested according to the following test method.

① Test

Take about 10~50 g of sample into a 300 mL flask, add 100 mL of 70% ethanol, connect a reflux condenser to the flask, perform heat extraction in a water bath, filter the solution, and concentrate it under vacuum. Dissolve the concentrate in water, perform extraction with ether to remove impurities, extract the water layer with unsaturated butanol, and concentrate it under vacuum. Then, dissolve it in a small amount of methanol and use it as test solution.

Apply test solution and standard solution to silica gel plate previously dried at 110˚C for 15 minutes and cooled down at room temperature for 30 minutes. Then, develop it with use of migration solvent, spray 10% sulfuric acid or 50% sulfuric acid in ethanol, and visualize the plate by heating it at 110˚C for 10 minutes. Or, after development, dry the silica gel plate at 110˚C and put it in a tank filled with saturated iodine solution for visualization. Check the color and position of spots with naked eyes or under ultraviolet (about 365 nm) and compare the spot of test solution with that of standard solution.

② Migration solvent

Ⓐ Chloroform : methyl alcohol : water = 65 : 35 : 10

Ⓑ 1 - butanol : acetic acid : water = 4 : 1 : 5

Ⓒ 1 - butanol : ethyl acetate : water = 5 : 1 : 4

(2) Tar color

It shall be tested according to 2.4 Tar Color in Article 9. General Testing Methods.

(3) Lead

It Shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(4) Tin

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(5) Bacterial count

It shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(6) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(7) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

18-6 Other Beverages

1) Definition

Other beverages refer to products that are processed by adding foods or additives to drinking water or by liquefying animal · vegetable substances to drink which are not specified as other food types.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Mixed beverage

Mixed beverage refers to a drink processed by adding foods or additives to drinking water or animal · vegetable raw materials

(2) Beverage base

Beverage base refers to a product processed by using animal · vegetable substances, or adding foods or additives after processing, which is to be drunk after mixing with drinking water, etc.

5) Specifications

(1) Oxygen content (mg/L) : Not less than 24 (Limited to products with oxygen added)

(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 (Limited to canned products excluding aluminum cans)

(5) Bacterial count : Not more than 100 per 1 mL (except products containing lactic acid bacteria; for powdered products, not more than 3,000 per 1 g).

(6) Coliform group : Shall be negative

(7) Lactobacillus count : Not less than the labeled amount (applicable only to products containing lactic acid bacteria)

(8) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Benzoic Acid Sodium benzoate Potassium benzoate Calcium benzoate	Not more than 0.6 (If it is used in combination with ethyl-p-hydroxy-benzoate and methyl-p-hydroxy-benzoate, the total amount used as benzoic acid and parahydroxybenzoate should not be more than 0.6 g/kg. Among these, the amount used as methyl p-hydroxybenzoate should not be more than 0.1 g/kg. Also, it should not be detected in

	products in powder form)
Methyl p-hydroxybenzoate Ethyl p-hydroxybenzoate	Not more than 0.1 (If it is used in combination with benzoic acid, sodium benzoate, potassium benzoate and calcium benzoate, the total amount used as parahydroxybenzoate and as benzoic acid should not be more than 0.6 g/kg. Among these, the amount used as parahydroxybenzoate should not be more than 0.1 g/kg. Also, it should not be detected in products in powder form

6) Test Methods

(1) Oxygen content

Fill sample to the full in a 300-mL bottle for measurement of dissolved oxygen (or BOD bottle, Figure 1), add 1 mL of manganese sulfate solution and 1 mL of alkaline potassium iodide-sodium azide solution, seal the bottle with a closure while avoiding any bubble, and mix them well. Allow it to stand for more than 2 minutes and mix them well if there are any fine particles in the upper layer. When clear layer of more than 100 mL is formed, open the bottle and apply 2.0 mL of sulfuric acid to the bottleneck. Close the bottle again and mix it well until brown precipitates are completely dissolved. Take 200 mL of the solution from the bottle and titrate it with 0.025 N sodium thiosulfate solution. Add 1 mL of starch solution and titrate it until the blue color of the solution becomes colorless.

$$\text{Dissolved oxygen (mg/L)} = a \times f \times \frac{V1}{V2} \times \frac{1{,}000}{V1-R} \times 0.2$$

a : amount of 0.025 N sodium thiosulfate solution consumed for titration (mL)

f : factor of 0.025 N sodium thiosulfate solution

V1 : total sample amount (mL)

V2 : amount of sample used for titration (mL)

R : amount of manganese sulfate solution and alkaline potassium iodide-sodium azide solution added (mL)

If the amount of dissolved oxygen is expressed as the saturation percentage, use Table 1 to find the value corresponding to the concentration of chlorine ion and the temperature of the sample and calculate the saturation percentage according to the following formula.

$$\text{DO Percentage (\%)} = \frac{\text{DO}}{\text{DOt}-\text{B}/760} \times 100$$

DO : amount of dissolved oxygen in sample (mg/L)

DOt : saturation of dissolved oxygen in pure water (mg/L)

B : atmospheric pressure during sampling (mmHg)

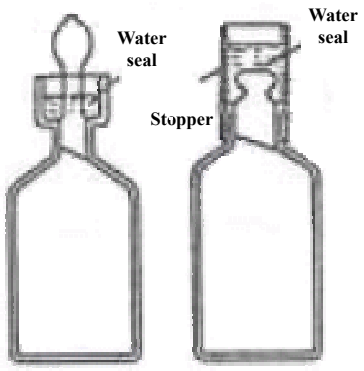


Figure 1. Bottle for Measurement of Dissolved Oxygen

Table 1. The Saturation Amount of Dissolved Oxygen

Temperature(˚C)	The saturation amount of dissolved oxygen (mg/L)	Temperature(˚C)	The saturation amount of dissolved oxygen (mg/L)
0	14.16	18	9.18
1	13.77	19	9.01
2	13.40	20	8.84
3	13.01	21	8.68
4	12.70	22	8.53
5	12.37	23	8.39
6	12.00	24	8.25
7	11.78	25	8.14
8	11.47	26	7.99
9	11.19	27	7.87
10	10.92	28	7.75

11	10.67	29	7.64
12	10.43	30	7.53
13	10.20	31	7.43
14	9.97	32	7.32
15	9.70	33	7.23
16	9.56	34	7.13
17	9.37	35	7.04

(2) Lead and Cadmium

It shall be tested according to (1) Lead and Cadmium, 6) Test Methods in 18-1 Fruit · Vegetable Beverages.

(3) Tin

It shall be tested according to (3) Tin, 6) Test Methods in 18-1 Fruit · Vegetable Beverages.

(4) Bacterial count

Take a sample as packaged in a casing, wash the surface, dry it out naturally, wipe the stopper and around stopper with cotton containing 70% alcohol, open, unseal or release it with a sterilized tool, transfer the content to another sterile container immediately, stir it, take it as the test solution. It shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods. In case of refreshing beverage containing carbonic acid, transfer the content to another sterilized container, stir it to volatilize carbon dioxide and use it as test solution.–

(5) Coliform group

With the above test solution prepared for (3) Bacterial Count, it shall be tested according to 3.. Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(6) Lactobacillus count

It shall be tested according to 3.9 Lactobacillus Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(7) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9.General Testing Methods.

19. Foods for Special Dietary Uses

Foods for special dietary uses refer to products for people requiring specially nutritional care such as infants · toddlers, patients, the elderly, obese people, pregnant, lactating women, etc. Such products are manufactured by processes such as mixing food with nutrients and include infant · toddler formula, follow-up formula, cereal based foods for infants · toddlers, other foods for infants · toddlers, foods for special medical purpose, formula for weight-control and food for pregnant · lactating women.

19-1 Infant Formula

1) Definition

Infant formula refers to a powdered or liquefied product for infants using the isolated soybean protein or protein isolated from other food as its protein source and adding nutrients such as minerals and vitamins, which are suitable for normal growth and development of infants. It is to be replacement for breast milk in case giving the breast is impossible or difficult. However, infant formula regulated in accordance with the 「Livestock Products Sanitary Control Act」 shall be exempted.

2) Requirements of Raw Material

(1) Isolated soybean protein or other protein isolated from other food used as raw material shall treated to assure its suitability for consumption by infants. However, gluten shall not be used as protein source.

(2) Raw materials shall not be treated by irradiation.

3) Manufacturing and Processing Standards

(1) Products shall be properly pasteurized or sterilized to prevent contamination with microorganisms.

(2) The dried product shall be filled with nitrogen gas, and liquid product shall be sterilized.

(3) In order to add nutrients found in break milk or to make it suitable to only nutrition source for infant and toddler, other nutrients can be added if necessary. However, the utility of nutrients shall be scientifically proved and the added quantity should be based on breast milk.

(4) Amino acid score of protein within final product shall be more than 85.

* Standard essential amino acid formation for scoring amino acid.

(Unit: mg/g crude protein)

	Histidine	Isoleucine	Leucine	Lysine	Methionine + Cysteine	Phenylalanine + Tyrosine	Threonine	Tryptophan	Valine	Total
Composition of amino acid	19	28	66	58	25	63	34	11	35	339

(5) For ready to use products, the solids content shall be 10~15%. For products to be consumed after dilution, the specifications for solids content may be different.

(6) Tin tube shall not be used as container for liquid or paste product.

(7) In case of using honey or maple syrup as raw material, the products shall be treated to destroy the spore of *Clostridium Botulinum.*

(8) Cocoa cannot be used as raw material.

(9) Dried raw materials shall be stored after drying to lower the water content for prevention of microbial growth and other raw materials shall be stored in a place where an equipment is installed to control temperature and humidity according to the characteristics of raw materials.

(10) In order to prevent microbial contamination or other kinds of contamination, the spray drying equipment used in the manufacture of powdered food for infants shall be periodically cleaned.

(11) Prior to packaging, efficient methods shall be used to prevent mixing foreign materials or metals, such as sieve, trap, magnet, or electric metal detector in the product.

4) Food type

5) Specifications

(1) Moisture (%) : Not more than 5.0 (Limited to powdered products)

(2) Calories (kcal/100 ml) : 60~70

(3) Crude protein (g/100kcal) : 1.8~4.0

(4) Crude fat (g/100kcal) : 4.4~6.0

(5) Linoleic acid (mg/100kcal) : Not less than 300

(6) α- Linoleic acid (mg/100 kcal) : Not less than 50

(7) The ratio of Linoleic acid andα- Linoleic acid : 5:1 ~15:1

(8) Carbohydrate (g/100kcal) : 9.0~14.0

(9) Vitamin A (μgRE/100 kcal or IU/100 kcal) : 75~150 or 250~500

(10) Vitamin D (μg/100 kcal or IU/100 kcal) : 1.0~2.5 or 40~100

(11) Vitamin C (mg/100 kcal) : Not less than 8

(12) Vitamin B_1 (μg/100 kcal) : Not less than 40

(13) Vitamin B_2 (μg/100 kcal) : Not less than 60

(14) Niacin (μg/100 kcal) : Not less than 250

(15) Vitamin B_6 (μg/100 kcal) : Not less than 35 (in case of 2.3g or more protein, Vitamin B_6 shall be 15 μg per additional 1 g of protein)

(16) Folic acid (μg/100 kcal) : Not less than 4.0

(17) Pantothenic acid (μg/100 kcal) : Not less than 300

(18) Vitamin B_{12} (μg/100 kcal) : Not less than 0.1

(19) Vitamin K_1 (μg/100 kcal) : 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 0.7(However, Vitamin E shall be at least 0.5 mg α-TE or 0.7 IU per additional 1g 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 (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) Artificial sweetener : Shall not be detected.

(36) Tar color : Shall not be detected.

(37) Bacterial count: n=5, c=2, m=1000, M=10,000 (For liquid products, n=5, c=0, m=0)

(38) Coliform group : n=5, c=0, m=0 (Excluding liquid products)

(39) *Enterobacter Sakazakii*(*Cronobacter* spp.): n=5, c=0, m=0 (Limited to powdered infant formula for infants under 6 months)

(40) *Bacillus Cereus* : Not more than 100 per 1g (Excluding liquid products)

(41) Sorched particles : Not more than 7.5 mg per100 g (Compared to a standard disk A as specified by the US ADPI) (Limited to powdered products)

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Calories

It shall be tested according to 1.1.6 Calorie Calculations, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Crude protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 11. Food Component Methods in Article 9. General Testing Methods.

(4) Crude fat

It shall be tested according to 1.1.5.1 Crude Fat, 1. Food Component Methods in Article 9. General Testing Methods.

(5) Linoleic acid

It shall be tested according to 1.1.5.4 Fatty Acid in Article 9. General Testing Methods.

(6) α- Linoleic acid

It shall be tested according to 1.1.5.4 Fatty Acid in Article 9. General Testing Methods.

(7) Linoleic acid and α- Linoleic acid

It shall be tested according to 1.1.5.4 Fatty Acid in Article 9. General Testing Methods.

(8) Carbohydrate

It shall be tested according to 1.1 General Component Methods in Article 9. General Testing Methods.

(9) Vitamin A

It shall be tested according to 1.2.2.1 Vitamin A, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(10) Vitamin D

It shall be tested according to 1.2.2.7 Vitamin D, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(11) Vitamin C

It shall be tested according to 1.2.2.4 Vitamin C, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(12) Vitamin B_1

It shall be tested according to 1.2.2.2 Vitamin B_1, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(13) Vitamin B_2

It shall be tested according to 1.2.2.3 Vitamin B_2, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(14) Niacin

It shall be tested according to 1.2.2.5 Niacin, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(15) Vitamin B_6

It shall be tested according to 1.2.2.9 Vitamin B_6 (Pyridoxine) or 1.2.2.12.2 Vitamin B_6, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(16) Folic acid

It shall be tested according to 1.2.2.12.3 Folic Acid, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(17) Pantothenic acid

It shall be tested according to 1.2.2.10 Pantothenic Acid or 1.2.2.12.4 Pantothenic Acid, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(18) Vitamin B_{12}

It shall be tested according to 1.2.2.11 Vitamin B_{12} or 1.2.2.12.5 Vitamin B_{12}, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(19) Vitamin K_1

It shall be tested according to 1.2.2.8 Vitamin K_1, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(20) Biotin

It shall be tested according to 1.2.2.12.7 Biotin, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(21) Choline

It shall be tested according to 1.2.2.12.6 Choline, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(22) Vitamin E

It shall be tested according to 1.2.2.6 Vitamin E, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(23) Sodium

It shall be tested according to 1.2.1.6 Sodium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(24) Potassium

It shall be tested according to 1.2.1.7 Potassium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(25) Chlorine

It shall be tested according to 1.2.1.5 Edible Salt, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods, dilute the titration solution to make the amount of chlorine to be 5 mg, titrate it with 0.01 N silver nitrate and calculate the chloride ion content according to the following formula.

$$\text{Chloride ion (mg/100g)} = 0.3545 \times a \times f \times \frac{b}{\text{Sam phg am ount}} \times 100$$

a : Consumed 0.01N silver nitrate (mL)

b : Dilution factor

f : Factor of 0.01N silver nitrate

(26) Calcium

It shall be tested according to 1.2.1.2 Calcium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(27) Phosphorus

It shall be tested according to 1.2.1.3 Phosphorus, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(28) Magnesium

Prepare a sample according to 나) Dry Ashing Method, 7.1.2.1 1) Preparation of Test Solution, 7.1 Meathods for Heavy Metals in Article 9. General Testing Methods and it shall be tested according to 가) Atomic Absorption Spectrophotometry or 나) ICP Method, 7.1.2.1 2) Measurement.

(29) Iron

It shall be tested according to 1.2.1.4 Iron, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(30) Iodine

It shall be tested according to 1.2.1.9 Iodine, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(31) Copper

Prepare a sample according to 나) Dry Ashing Method, 7.1.2.1 1) Preparation of Test Solution, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods and it shall be tested according to 가) Atomic Absorption Spectrophotometry or 나) ICP Method, 7.1.2.1 2) Measurement.

(32) Zinc

It shall be tested according to 1.2.1.8 Zinc, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(33) Manganese

Prepare a sample according to 나) Dry Ashing Method, 7.1.2.1 1) Preparation of Test Solution, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods and it shall be tested according to 가) Atomic Absorption Spectrophotometry or 나) ICP Method, 7.1.2.1 2) Measurement..

(35) Selenium

It shall be tested according to 1.2.1.10 Selenium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(35) Artificial Sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(36) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General testing Methods.

(37) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(38) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(39) *Enterobacter Sakazakii*

It shall be tested according to 3.21 *Enterobacter Sakazakii*, 3. Microbiological Methods in Article 9. General Testing Methods.

(40) *Bacillus Cereus*

It shall be tested according to 3.18.2 Quantitative Test, 3.18 *Bacillus Cereus,* 3. Microbiological Methods in Article 9. General Testing Methods.

(41) Sorched particles

It shall be tested according to 바) Ice cream powder, unsweetened condensed milk, sweetened condensed milk, sweetened condensed skim milk, whole milk powder, skim milk powder, sweetened milk powder and powdered formula, formula, 3) Test Operation, 9.2.2 Foreign Materials in Foods, 9.2 Methods for Foreign Materials in Article 9. General Testing Methods.

19-2 Follow-up Formula

1) Definition

Follow-up formula refers to a product manufactured by using protein containing food such as isolated soybean protein and adding nutrients such as minerals and vitamins essential for the normal development and growth of infant and young children over 6 months. It is manufactured as powdered or liquid form to be consumed as liquid baby food. However, infant formula regulated in accordance with the Livestock Products Sanitary Control Act shall be exempted.

2) Requirements of Raw Material

(1) Raw materials shall not be treated by irradiation.

3) Manufacturing and Processing Standards

(1) Products shall be properly pasteurized or sterilized to prevent contamination with microorganisms.

(2) The dried product shall be filled with nitrogen gas, and liquid product shall be sterilized,

(3) In order to add nutrients found in break or to make it suitable to only nutrition source for infant and young children, other nutrients can be added if necessary. However, the utility of nutrients shall be scientifically proved and the added quantity should be based on breast milk.

(4) Amino acid score of protein within final product shall be no less than 85.

* For composition table of essential amino acids for calculation of amino acid scores, refer to 19-1 3) (4).

(5) For ready to use products, the solids content shall be 10~15%. For products to be consumed after dilution, the specifications for solids content may be different.

(6) Tin tube shall not be used as container for liquid or paste product.

(7) In case of using honey or maple syrup as raw material, the products shall be treated to destroy the spore of *Clostridium Botulinum.*

(8) Coca may be used in products for young children over 12 months. Its content shall not be more than 1.5% when diluted with water before consumption.

(9) Dried raw materials shall be stored after drying to lower the water content for prevention of microbial growth and other raw materials shall be stored in a place where an equipment is installed to control temperature and humidity according to the characteristics of raw materials.

(10) In order to prevent microbial contamination or other kinds of contamination, the spray drying n equipment used in the manufacture of powdered food for infants and young children shall be periodically cleaned.

(11) Prior to packaging, efficient methods shall be used to prevent mixing foreign materials or metals, such as sieve, trap, magnet, or electric metal detector in the product.

4) Food Types

5) Specifications

(1) Moisture (%) : Not more than 5.0 (Limited to powdered products)

(2) Calories (Kcal/100 ml) : 60~70

(3) Crude Protein (g/100kcal) : 3.0~5.5

(4) Crude Fat (g/100kcal) : 3.0~6.0

(5) Linoleic Acid (mg/100 kcal) : Not less than 300

(6) Vitamin A (μgRE/100 kcal or IU/100 kcal) :75~225 or 250~750

(7) Vitamin D (μgRE/100 kcal or IU/100 kcal) : 1.0~3.0 or 40~120

(8) Vitamin C (mg/100 kcal) : Not less than 8

(9) Vitamin B_1 (μg/100 kcal) : Not less than 40

(10) Vitamin B_2 (μg/100 kcal) : Not less than 60

(11) Niacin (μg/100 kcal) : Not less than 250

(12) Vitamin B_6 (μg/100 kcal) : Not less than 45 (in case of 3.0 g or more protein, Vitamin B_6 shall be 15 μg per additional 1 g protein)

(13) Folic Acid (μg/100 kcal) : Not less than 4.0

(14) Pantothenic Acid (μg/100 kcal) : Not less than 300

(15) Vitamin B_{12} (μg/100 kcal) : Not less than 0.15

(16) Vitamin K_1 (μg/100 kcal) : Not less than 4.0

(17) Biotin (μg/100 kcal) : Not less than 1.5

(18) Vitamin E (mg α-TE/100 kcal or IU/100 kcal) : Not less than 0.5 or 0.7 (However, Vitamin E shall be increase at least 0.5 mg α-TE or 0.7 IU per additional 1g of linoleic acid)

(19) Sodium (mg/100 kcal) : 20~85

(20) Potassium (mg/100 kcal) : Not less than 80

(21) Chlorine (mg/100 kcal) : Not less than 55

(22) Calcium (mg/100 kcal) : Not less than 90

(23) Phosphorus (mg/100 kcal) : Not less than 60 (the ratio of calcium to phosphorus shall be 1.2:1~2:1)

(24) Magnesium (mg/100 kcal) : Not less than 6.0

(25) Iron (mg/100 kcal) : Not less than 1.0

(26) Iodine (μg/100 kcal) : Not less than 5.0

(27) Zinc (mg/100 kcal) : Not less than 0.5

(28) Selenium (μg/100 kcal) : Not more than 9.0

(29) Artificial Sweetener : Shall not be detected

(30) Tar color : Shall not be detected

(31) Bacterial count: n=5, c=2, m=1,000, M=10,000 (For liquid products, n=5, c=0, m=0)

(32) Coliform group : n=5, c=0, m=0 (Excluding liquid products)

(33) *Bacillus Cereus* : Not more than 100 per 1 g (Excluding liquid products)

(34) Sorched particles : Not more than 7.5 mg per 100 g (Compared to a standard disk A as specified by the US ADPI) (Limited to powdered products)

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Calories

It shall be tested according to 1.1.6 Calorie Calculations, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Crude protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1. Food Component Methods in Article 9. General Testing Methods.

(4) Crude fat

It shall be tested according to 1.1.5.1. Crude Fat, 1. Food Component Methods in Article 9. General Testing Methods.

(5) Linoleic acid

It shall be tested according to 1.1.5.4 Fatty Acid, 1. Food Component Methods in Article 9. General Testing Methods.

(6) Vitamin A

It shall be tested according to 1.1.2.1 Vitamin A, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(7) Vitamin D

It shall be tested according to 1.1.2.7 Vitamin D, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(8) Vitamin C

It shall be tested according to 1.2.2.4 Vitamin C, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(9) Vitamin B_1

It shall be tested according to 1.2.2.2 Vitamin B_1, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(10) Vitamin B_2

It shall be tested according to 1.2.2.3 Vitamin B_2, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(11) Niacin

It shall be tested according to 1.2.2.5 Niacin, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(12) Vitamin B_6

It shall be tested according to 1.2.2.9 Vitamin B_6 (Pyridoxine) or 1.2.2.12.2 Vitamin B_6, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(13) Folic acid

It shall be tested according to 1.2.2.12.3 Folic Acid, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(14) Pantothenic acid

It shall be tested according to 1.2.2.10 Pantothenic Acid or 1.2.2.12.4 Pantothenic Acid, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(15) Vitamin B_{12}

It shall be tested according to 1.2.2.11 Vitamin B_{12} or 1.2.2.12.5 Vitamin $B_{12,}$ 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(16) Vitamin K_1

It shall be tested according to 1.2.2.8. Vitamin K_1, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(17) Biotin

It shall be tested according to 1.2.2.12.7 Biotin, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(18) Vitamin E

It shall be tested according to 1.2.2.6 Vitamin E, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(19) Sodium

It shall be tested according to 1.2.1.6. Sodium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(20) Potassium

It shall be tested according to 1.2.1.7 Potassium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(21) Chlorine

It shall be tested according to 1.2.1.5 Edible Salt, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods, dilute chlorine amount in the titration solution to be 5 mg, titrate it with 0.01 N silver nitrate and calculate the chloride ion content according to the following formula.

$$\text{Chloride ion (mg/100g)} = 0.3545 \times a \times f \times \frac{b}{\text{Sam phg am ount}} \times 100$$

a : Consumed 0.01 N silver nitrate (mL)

b : Dilution factor

f : Factor of 0.01 N silver nitrate

(22) Calcium

It shall be tested according to 1.2.1.2 Calcium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(23) Phosphorus

It shall be tested according to 1.2.1.3 Phosphorus, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(24) Magnesium

Prepare a sample according to 나) Dry Ashing Method, 7.1.2.1 1) Preparation of Test Solution, 7.1. Methods for Heavy Metals in Article 9. General Testing Methods and it shall be tested according to 가) Atomic Absorption Spectrophotometry or 나) ICP Method, 7.1.2.1 2) Measurement.

(25) Iron

It shall be tested according to 1.2.1.4 Iron, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(26) Iodine

It shall be tested according to 1.2.1.9 Iodine, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(27) Zinc

It shall be tested according to 1.2.1.8 Zinc, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(28) Selenium

It shall be tested according to 1.2.1.10 Selenium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(29) Artificial sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(30) Tar color

It shall be tested according to 2.4 Coloring Agent in Article 9. General Testing Methods.

(31) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article9. General Testing Methods.

(32) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods described in Article 9. General Testing Methods.

(33) *Bacillus Cereus*

It shall be tested according to 3.18.2 Quantitative Tests 3.18 *Bacillus Cereus,* 3. Microbiological Methods in Article 9. General Testing Methods.

(34) Carbide

It shall be tested according to 바) Ice cream powder, unsweetened condensed milk, sweetened condensed milk, sweetened condensed skim milk, whole milk powder, skim milk powder, sweetened milk powder and powdered formula, formula, 3) Tests for 9.2.2 Foreign Materials in Foods, 9.2. Foreign Materials in Article 9. General Testing Methods.

19-3 Cereal Based Foods for Infants and Young Children

1) Definition

Cereal based food for infants and young children refers to product which is intended for weaning and supplementing nutrition for infants in weaning period and young children. It is manufactured and processed by using grains, soybeans, potatoes etc as the main material (25% or more solid content in end products) and adding other food, nutrients, etc.

2) Requirements of Raw Material

(1) Raw materials shall not be treated by irradiation.

3) Manufacturing and Processing Standards

(1) Products shall be properly pasteurized or sterilized to prevent contamination with microorganisms.

(2) The dried product shall be filled with nitrogen gas, and liquid product shall be packaged after sterilization.

(3) In order to add nutrients found in break or to make it suitable to only nutrition source for infant and young children, other nutrients can be added if necessary. However, the utility of nutrients shall be scientifically proved and the added quantity should be based on breast milk.

(4) Amino acid score of protein within final product shall be more than 85.

* For composition table of essential amino acids for calculation of amino acid scores, refer to 19-1 3) (4).

(5) If saccharides are added to cereal products for infants, they shall not exceed 20% of total calorie and the amount of sugar shall not exceed 50% of total saccharides added.

(6) For ready to use products, the solids content shall be 10-15%. For products to be consumed after dilution, the specifications for solids content may be different.

(7) Tin tube shall not be used as container for liquid or paste product.

(8) In case of using honey or maple syrup as raw material, the products shall be treated to destroy the spore of *Clostridium Botulinum*

(9) Cocoa may be used in products for young children over 12 months. Its content shall be not more than 1.5% when diluted with water before consumption.

(10) Dried raw materials shall be stored after drying to lower the water content for prevention of microbial growth and other raw materials shall be stored in a place where an equipment is installed to control temperature and humidity according to the characteristics of raw materials.

(11) In order to prevent microbial contamination or other kinds of contamination, the spray drying equipment used in the manufacture of powdered food for infants and young children shall be periodically cleaned.

(12) Prior to packaging, efficient methods, such as sieve, trap, magnet, or electric metal detector, shall be used to prevent mixing of foreign materials or metals.

4) Food Types

5) Specifications

(1) Moisture (%) : Not more than 10.0 (Limited to powdered, solid products)

(2) Crude Protein (%) : Not less than 10.0 (Based on dried products)

(3) Crude Fat (%) : Not less than 5.0 (Based on dried products)

(4) Gelatinization Degree (%) : Not less than 80.0 (Limited to powdered, solid products containing 25% or more grain, soybean, potatoes or the processed ones)

(5) Sodium (mg/100 kcal) : Not more than 100

(6) Iron (mg/100 kcal) : Not less than 2.0

(7) Vitamin A (IU/100 kcal) : Not less than 200

(8) Vitamin B_1 (μg/100kcal) : Not less than 80

(9) Vitamin B_2 (μg/100kcal) : Not less than 130

(10) Vitamin C (mg/100kcal) : Not less than 4

(11) Artificial Sweetener : Shall not be detected

(12) Tar color : Shall not be detected.

(13) Coliform group : n=5, c=0, m=0

(14) *Enterobacter Sakazakii*(*Cronobacter* spp.) : n=5, c=0, m=0 (Limited to powdered cereal based foods for infants and young children under 6 months)

(15) *Bacillus Cereus* : Less than 100 per 1 g

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Crude protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Crude fat

It shall be tested according to 1.1.5.1 Crude Fat, 1. Food Component Methods in Article 9. General Testing Methods.

(4) Gelatinization Degree (α)

In case it contains 3~4% or more fat, remove [degrease] it with petroleum ether, dry it out at 50˚C or lower degree and use it as the sample; if it contains less than 3~4% of fat, use it directly as the sample. Prepare five 100 mL-Erlenmeyer flasks and label them A_1, A_2, A_3, A_4 and B, respectively.

Each 1.00 g of samples should be put in A_1 ~ A_4 respectively while the differences between the samples' weights should be within ± 0.5%. Add 50 mL water into 5 flasks. Heat A_1 and A_2 to boiling points for 15 minutes, or heat them in water of 100˚C for 30 minutes and quickly cool them down in iced water or cold water to ambient temperature.

Add 5mL of 5% diastase solution into each A_1, A_3 and B, shake 5 flasks in constant temperature water bath, maintaining the temperature 37± 1˚C for 90 minutes, immediately add 2 mL 1 N hydrochloric acid to the flasks and add some water to prepare 100 mL solutions. Filter them with dry filter paper and take the 10 mL of remaining solution into five each Erlenmeyer flasks, designating it a_1, a_2, a_3, a_4 and b.

For blank test, add 10 mL of water to another Erlenmeyer flask and in all 6 flasks, add 1 mL of iodine solution to each. Then, add 18 mL of 0.1 N sodium hydroxide solution to 6 flasks in regular sequence and leave them for 15 minutes after sealing up, shaking and mixing.

Once the first flask is passed 15 minutes, remove the stopper of each flask in same order and intervals as when 0.1 N sodium hydroxide is added and immediately add 2 mL of sulphuric acid to them. Titrate the solutions with 0.1 N sodium thiosulfate, designate the measurements

of a_1, a_4 and b as P_1, P_4 and q; 'r' for titration of the blank test, and calculate Gelatinization Degree (α) according to the following formula.

$$\text{Gelatinization Dgree } (\alpha)\ (\%) = \frac{(r-p3)-(r-p4)-(r-q)}{(r-p1)-(r-P2)-(r-q)} \times 100$$

The above procedure can be summarized as follows

Operations	A_1	A_2	A_3	A_4	B
1. Sampling	○	○	○	○	×
2. Add 50 mL water	○	○	○	○	○
3. Heat to boiling for 15 minutes	○	○	×	×	×
4. Rapid cooling down to ambient temp.	○	○	×	×	×
5. Add 5 mL of 5% diastase	○	×	○	×	○
6. Shaking at constant temperature 37˚C for 90 min.	○	○	○	○	○
7. Add 2 mL of 1N hydrochloric acid	○	○	○	○	○
8. Obtain 100 mL (constant weight)	○	○	○	○	○
9. Filter with dry filter paper	○	○	○	○	○
10. Remaining solution (test solution)	a_1	a_2	a_3	a_4	b

(5) Sodium

It shall be tested according to 1.2.1.6. Sodium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(6) Iron

It shall be tested according to 1.2.1.4. Iron, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(7) Vitamin A

It shall be tested according to 1.2.2.1 Vitamin A, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(8) Vitamin B_1

It shall be tested according to 1.2.2.2 Vitamin B_1, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(9) Vitamin B_2

It shall be tested according to 1.2.2.3 Vitamin B_2, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(10) Vitamin C

It shall be tested according to 1.2.2.4 Vitamin C, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(11) Artificial sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(12) Tar color

It shall be tested according to 2.4. Coloring Agent in Article 9. General Testing Methods.

(13) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(14) *Enterobacter Sakazakii*

It shall be tested according to 3.21 *Enterobacter Sakazakii*, 3. Microbiological Methods in Article 9. General Testing Methods.

(15) *Bacillus Cereus*

It shall be tested according to 3.18.2 Quantitative Test, 3.18 *Bacillus Cereus*, 3. Microbiological Methods in Article 9. General Testing Methods.

19-4 Other Foods for Infants and Young children

1) Definition

Other foods for infant and young children refer to products manufacture and processed to aid infants and babies in development or weaning period to adapt to general food. 19-1 Infant Formula and 19-3 Cereal based foods for infants and young children are excluded.

2) Requirements of Raw Material

(1) Raw materials shall not be treated by irradiation.

3) Manufacturing and Processing Standards

(1) Products shall be properly pasteurized or sterilized to prevent contamination with microorganisms.

(2) The dried product shall be filled with nitrogen gas, and liquid product shall be sterilized.

(3) In order to add nutrients found in break or to make it suitable to only nutrition source for infant and young children, other nutrients can be added if necessary. However, the utility of nutrients shall be scientifically proved and the added quantity should be based on breast milk.

(4) For ready to use products, the solids content shall be 10-15%. For products to be consumed after dilution, the specifications for solids content may be different.

(5) Tin tube shall not be used as container for liquid or paste product.

(6) In case of using honey or maple syrup as raw material, the products shall be treated to destroy the spore of *Clostridium Botulinum*

(7) Cocoa may be used in products for young children over 12 months. Its content shall not be more than 1.5% when diluted with water before consumption.

(8) Dried raw materials shall be stored after drying to lower the water content for prevention of microbial growth and other raw materials shall be stored in a place where an equipment is installed to control temperature and humidity according to the characteristics of raw materials.

(9) In order to prevent microbial contamination or other kinds of contamination, the spray drying equipment used in the manufacture of powdered food for infants and young children shall be periodically cleaned.

(10) Prior to packaging, efficient methods, such as sieve, trap, magnet, or electric metal detector, shall be used to prevent mixing of foreign materials or metals.

4) Food Types

5) Specifications

(1) Moisture (%) : Not more than 10.0 (Limited to powdered, solid products)

(2) Gelatinization Degree (%) : Not less than 80.0 (Limited to powdered, solid products containing no less than 25% grain, soybean, potatoes or the processed ones. However, products requiring heating process before consumption will be excluded)

(3) Sodium (mg/100 kcal) : Not more than 200

(4) Artificial Sweetener : Shall not be detected.

(5) Tar color : Shall not be detected.

(6) Coliform group : n=5, c=0, m=0

(7) Bacterial count : n=5, c=1, m=10, M=100(For liquid products)

(7) *Enterobacter Sakazakii*(*Cronobacter* spp.) : n=5, c=0, m=0 (Limited to powdered other foods for infants and young children under 6 months)

(15) *Bacillus Cereus* : Not more than 100 per 1 g

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Gelatinization Degree (α)

It shall be tested according to (4) Gelatinization Degree (α), 4) Test Methods in 19-3 Cereal Based Foods for Infants and Young Children.

(3) Sodium

It shall be tested according to 1.2.1.6 Sodium, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(4) Artificial sweetener

It shall be tested according 2.2.1 Sodium Saccharin in Article 9. General Testing Methods.

(5) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(6) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Method in Article 9. General Testing Methods.

(7) Bacterial count

It shall be tested according to 3.5.1 Bacterial count, 3. Microbiological Methods in Article 9. General Testing Methods.

(8) *Enterobacter Sakazakii*

It shall be tested according to 3.21 *Enterobacter Sakazakii,*. 3. Microbiological Methods in Article 9. General Testing Methods.

(9) *Bacillus Cereus*

It shall be tested according to 3.18.2 Quantitative Test, 3.18 *Bacillus Cereus*, 3. Microbiological Methods in Article 9. General Testing Methods.

19-5 Foods for Special Medical Purpose

1) Definition

Foods for special medical purpose refer to those manufactured and processed to provide whole or parts of a meal through oral or tube feeding to patients whose normal consumption, digest, absorption, or metabolism functions are limited or damaged or those who have different nutritional requirements due to diseases or clinical conditions.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Depending on the nature, the food product shall be manufactured and processed under consideration of consumption, digestion, absorption, metabolism, and excretion functions of target population and according to the manufacturer's standards.

(2) Such manufacturer's standards regarding mixing of components, and manufacturing and processing of products shall be scientifically based on nutritional, medical, and physiological data.

(3) Balanced nutritional food for patients to be used to provide whole or parts of a meal shall be manufactured to assure that vitamin A, B_1, B_2, B_6, C, D, E, niacin, folic acid, protein, calcium, iron, and zinc per 1000 kcal of the product shall be included at 50% or more than the nutrient reference values.

(4) Food for diabetes patients to be used to provide whole or some of meal shall be manufactured to assure that vitamin A, B_1, B_2, B_6, C, D, E, niacin, folic acid, protein, calcium, iron, and zinc per 1000 kcal of the product shall be included at 50% or more than the nutrient reference values. Calorie from saturated fat shall be less than 10% of total calorie. The amount of cholesterol shall be not more than 100 mg per 1000 kcal of the product and the calorie from monosaccharides and disaccharides shall be less than 10% of total calorie.

(5) Food for patients with renal disease to be used to provide whole or parts of a meal shall be manufactured to assure that vitamin B_1, B_2, B_6, C, E, niacin, and folic acid per 1000 kcal of the product shall be included at 50% or more than the nutrient reference values. However, vitamin A and D shall be included at 20% or more than the nutrient reference values. The amount of potassium and phosphorus have to be limited for renal patients and shall be included at below the

labeled amount. In addition, food for renal patients without dialysis shall be manufactured to assure that the calorie from protein components shall be not more than 10% of total calorie. For food for renal patients with dialysis, the calorie from protein components shall be not less than 12% of total calorie. Such food for renal patients with dialysis shall be designed to have not less than 1.5 kcal per 1 mL (g) of the product. Sodium content shall be not more than 800 mg per 1000 kcal of the product.

(6) Hydrolyzed food for patients with bowel diseases to be used to provide whole or parts of a meal shall be manufactured to assure that vitamin A, B_1, B_2, B_6, C, D, E, niacin, folic acid, calcium, iron, and zinc per 1000 kcal of the product shall be included at 50% or more than the nutrient reference values. In addition, the calorie from protein components shall be not less than 30% of total calorie. Protein components shall be supplied in the protein hydrolysis or free amino acids.

(7) Food for medical purpose to be used to provide calorie or nutrition shall be manufactured to assure that 1 mL (g) of the product shall have not less than 3 kcal.

(8) If a product falling into one of (3) to (7) is intended to be used in specific population, the nutrient reference values for such target Korean population may be used.

(9) According to the food type and considering the target population, selenium, chrome and molybdenum can be added as nutrients.

4) Food Types

(1) Balanced nutritional food for patients

Balanced nutritional food for patients refers to a product manufactured and processed to adjust the nutritional components in order to provide whole or parts of a meal containing balanced nutritive substances to patients and it does not include the food falling into one of (2) to (8).

(2) Food for diabetes patients

Food for diabetes patients refers to a product manufactured or processed to adjust the nutritional components in order to provide whole or parts of a meal containing nutritive substances required for diabetes or patients with hyperglycemia.

(3) Food for renal patients

Food for renal patients refers to a product manufactured or processed to adjust the nutritional components in order to provide whole or parts of a meal containing nutritive substances required for patients with chronic renal disorders.

(4) Hydrolyzed food for patients with bowel diseases

Hydrolyzed food for patients with bowel diseases refers to a product manufactured or processed to hydrolyze the nutritional components in order to provide whole or parts of a meal containing nutritive substances required for patients with bowel diseases who have difficulty in digest and absorption of nutritive substances.

(5) Medical-purpose food for providing calorie and nutrition

Medical-purpose food for providing calorie and nutrition refers to a product manufactured or processed to allow patients who require additional calorie and nutrition due to difficult metabolism and malnutrition arising from diseases to take it alone or together with other food for medical purpose.

(6) Food for patients with congenital metabolic disorders

Food for patients with congenital metabolic disorders refers to a product manufactured or processed to remove or restrict certain substances not metabolized in patients with congenital metabolic disorders or to add other essential substances. Congenital metabolic disorders mean congenital genetic diseases arising from biochemical metabolism deficiency that causes accumulation of hazardous substances or lack of essential substances due to incompetent metabolic enzymes or difficulty in transfer of substances and include the phenylketonuria, hypothyroidism, galactosemia, homocystinuria, maple syrup urine disease, congenital adrenal hyperplasia, and other disorders showing abnormal metabolism of amino acids, organic acids, carbohydrates, lipids and fatty acids, and inorganic matter.

(7) Formula for special medical purpose for infants and young children

Formula for special medical purpose for infants and young children refers to a product specially designed to provide nutritive substances to immature or premature infants who have different nutritive requirements from normal infants and young children (0~36 months). However, those classified as infant formula, follow-up formula, cereal based foods for infants and young children, other foods for infant and young children, and food for patients with congenital metabolic disorders are excluded.

(8) Viscosity-improving food for dysphagia patients

Viscosity-improving food for dysphagia patients refers to a product designed to improve the viscosity of solid or liquid food in order to reduce the risk of aspiration or difficulty in intake.

5) Specifications

Types / Items	Balanced nutritional food for patients	Food for diabetes patients
(1) Appearance	Unique color and flavor without off-taste or off-lavor	Unique color and flavor without off-taste or off-flavor
(2) Moisture (%)	Not more than 10.0% (Limited to powdered products)	Not more than 10.0% (Limited to powdered products)
(3) Crude protein	Not less than the labeled amount	Not less than the labeled amount
(4) Crude fat	Not less than the labeled amount	Not more than the labeled amount (for saturated fat, less than 10%)
(5) Sugars	-	Not more than the labeled amount (Limited to monosaccharides and disaccharides)
(6) Dietary fibers	-	Not less than the labeled amount
(7) Vitamin	Not less than the labeled amount (applicable to vitamin A, B_1, B_2, B_6, C, D, E, niacin, and folic acid)	Not less than the labeled amount (applicable to vitamin A, B_1, B_2, B_6, C, D, E, niacin, and folic acid)
(8) Inorganic matter	Not less than the labeled amount (applicable to calcium, iron, and zinc)	Not less than the labeled amount (applicable to calcium, iron, and zinc)
(9) Fluorine	Not more than 0.2 mg/100kcal (limited to products with fluorine-containing food additive)	-
(9) Coliform group	Negative	Negative
(10) Bacterial count	Not more than 100/ 1 mL (for powdered products, not more than 20,000 per 1 g)	Not more than 100/1 mL (for powdered products, not more than 20,000 per 1 g)
(11) Tar color	Not detected	Not detected
(12) *Bacillus cereus*	Not more than 100 per 1 g	Not more than 100 per 1 g

Types / Items	Food for renal patients	Hydrolyzed food for patients with bowel diseases
(1) Appearance	Unique color and flavor without off-taste or off-flavor	Unique color and flavor without off-taste or off-flavor
(2) Moisture (%)	Not more than 10.0% (Limited to powdered products)	Not more than 10.0% (Limited to powdered products)
(3) Calories	Not less than 1.5 kcal per 1 mL (or g) of product (for powdered products, based on standard intake method)	-
(4) Crude protein	Not more than the labeled amount (for products for non-dialysis patients) Not more than the labeled amount (for products for dialysis patients)	Not less than the labeled amount
(5) Crude fat	-	Not less than the labeled amount
(6) Vitamin	Not less than the labeled amount (applicable to vitamin A, B_1, B_2, B_6, C, D, E, niacin, and folic acid)	Not less than the labeled amount (applicable to vitamin A, B_1, B_2, B_6, C, D, E, niacin, and folic acid)
(7) Inorganic matter	Not more than the labeled amount (applicable to sodium, potassium, and phosphorus)	Not less than the labeled amount (applicable to calcium, iron, and zinc)
(8) Coliform group	Negative	Negative
(9) Bacterial count	Not more than 100 per 1 mL (for powdered products, not more than 20,000 per 1 g)	Not more than 100 per 1 mL (for powdered products, not more than 20,000 per 1 g)
(10) Tar color	Not detected	Not detected
(11) *Bacillus cereus*	Not more than 100 per 1 g	Not more than 100 per 1 g

Types / Items	Medical purpose food for providing calorie and nutrition	Food for patients with congenital metabolic disorder
(1) Appearance	Unique color and flavor without off-taste or off-flavor	Unique color and flavor without off-taste or off-flavor
(2) Moisture (%)	Not more than 10.0% (Limited to powdered products)	Not more than 10.0% (Limited to powdered products)
(3) Calorie	Not less than 3 kcal/mL(or g)	-
(4) Crude protein	Not more than the labeled amount	Not less than the labeled amount (Not more than the labeled amount if it has to be limited due to the nature of the disease)
(5) Crude fat	Not less than the labeled amount	Not less than the labeled amount (Not more than the labeled amount if it has to be limited due to the nature of the disease)
(6) Vitamin	-	Not less than the labeled amount (Not more than the labeled amount if it has to be limited due to the nature of the disease)
(7) Inorganic matter	-	Not less than the labeled amount (Not more than the labeled amount if it has to be limited due to the nature of the disease)
(8) Coliform group	Negative	Negative
(9) Bacterial count	Not more than 100 per 1 mL (for powdered products, not more than 20,000 per 1 g)	Not more than 100 per 1 mL (for powdered products, not more than 20,000 per 1 g)
(10) Tar color	Not detected	Not detected
(11) Bacillus cereus	Not more than 100 per 1 g	Not more than 100 per 1 g

Types / Items	Formula for special medical purpose for infants and young children	Viscosity-improving food for dysphagia patients
(1) Appearance	Unique color and flavor without off-taste or off-flavor	Unique color and flavor without off-taste or off-flavor
(2) Moisture (%)	Not more than 10.0% (Limited to powdered products)	Not more than 10.0% (Limited to powdered products)
(3) Crude protein	Not less than the labeled amount	-
(4) Crude fat	Not less than the labeled amount	-
(5) Vitamin	Not less than the labeled amount	-
(6) Inorganic matter	Not less than the labeled amount. However, not more than 9 ㎍/100 kcal for Selenium and not more than 10 ㎍/100 kcal for chrome and molybdenum	-
(7) Coliform group	n=5, c=0, m=0	Negative
(8) Bacterial count	n=5, c=1, m=10, M=100 (For powdered products, n=5, c=2, m=1,000, M=10,000)	Less than 100 per 1 mL (for powdered products, not more than 20,000 per 1 g)
(9) Tar color	Not detected	Not detected
(10) Scorched particles	Less than 7.5 mg per 100 g (compared to standard disk A as specified by the US ADPI) (Limited to powdered products)	-
(11) *Enterobacter Sakazakii*	n=5, c=0, m=0 (Limited to powdered formula for special medical purpose for infants and young children under 6 months)	-
(12) *Bacillus cereus*	Not more than 100 per 1 g	Not more than 100 per 1 g

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Nutrients

It shall be tested according to 1. Food Component Methods and 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(3) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(4) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(6) *Enterobacter Sakazakii*

It shall be tested according to 3.21 *Enterobacter Sakazakii,* 3. Microbiological Methods in Article 9. General Testing Methods.

(7) *Bacillus Cereus*

It shall be tested according to 3.18.2 Quantitative Test, 3.18 *Bacillus Cereus*, 3. Microbiological Methods in Article 9. General Testing Methods.

(8) Carbide

It shall be tested according to 바) Ice cream powder, unsweetened condensed milk, sweetened condensed milk, sweetened condensed skim milk, whole milk powder, skim milk powder, sweetened milk powder and powdered formula, formula, 3) Tests for 9.2.2. Foreign Materials in Foods, 9.2 Foreign Materials in Article 9. General Testing Methods.

19-6 Weight Control Foods

1) Definition

Weight control food refers to a product manufactured by adding or deleting some nutrients substances in order to provide whole or some of meal for those who need to control weight loss or gain.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) This food for providing whole or parts of a meal shall be manufactured to ensure that vitamin A, B_1, B_2, B_6, C, niacin, folic acid, and vitamin E per one serving shall be included at 25% or more than the nutrient reference values and protein, calcium, iron, and zinc per one serving shall be included at 10% or more than the nutrient reference values. However, if the product is intended to be used in specific population, the Korean Dietary Reference Intake for the target population may be used.

(2) A formulated food to be used to replace the whole daily meals shall provide the calorie of 800~1200 kcal. Individual servings of such product (3 to 4 times a day) shall have approximately 1/3 to 1/4 of total daily calorie. For a formulated food to be used to replace one to two meals, each serving shall provide 200~400 kcal. However, the calorie may be calculated based on the labeled intake method.

4) Food Types

5) Specifications

(1) Moisture (%) : Not more than 10.0 (Limited to powder, granulated, solid dry products)

(2) Crude protein (g) : Not less than the labeled amount

(3) Vitamins : Not less than the labeled amount (Limited to Vitamin A (μg), B_1 (mg), B_2 (mg), B_6 (mg), C (mg), niacin (mg), folic acid (μg) and Vitamin E (mg))

(4) Minerals : Not less than the labeled amount (Limited to calcium (mg), iron (mg) and zinc (mg))

(5) Coliform group : Shall be negative

(6) *Bacillus Cereus* : Not more than 100 per 1g (Not more than 1,000 per 1 g for products with soy sauces and pastes as the main material)

6) Test Method

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Crude protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Vitamins

It shall be tested according to 1.2.2 Vitamins, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(4) Minerals

It shall be tested according to 1.2.1 Minerals, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(5) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(6) *Bacillus Cereus*

It shall be tested according to 3.18.2 Quantitative test, 3.18. *Bacillus Cereus,* 3. Microbiological Methods in Article 9. General Testing Methods.

19-7 Foods for Pregnant or Lactating Women

1) Definition

Foods for pregnant or lactating women refers to a product manufactured to provide whole or some of meal for pregnant or lactating women who has different nutritional requirements from general population due to pregnancy, childbirth or lactation.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Vitamins, minerals, or others added to provide whole or some of meal to pregnant or lactating women shall be uniformly mixed.

(2) Raw materials and nutrients shall be combined added on the basis of the Korean Dietary Reference Intake for pregnant or lactating women. The content of nutrients to be provided in a day or in a serving shall be adequately adjusted.

4) Food Types

5) Specifications

(1) Appearance : Shall have its own unique flavor, color, taste without off-flavor or off-taste

(2) Moisture (%) : Not more than 10.0 (Limited to powder or solid dry products)

(3) Nutrient (%) : Not less than the labeled amount

(4) Coliform group : Shall be negative

(5) Bacterial count : Not more than 100 per 1 mL (Limited to liquid products)

(6) Tar color : Shall not be detected

6) Test Method

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Nutrients

It shall be tested according to 1. Food Component Methods and 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(3) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(4) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

20. Soy Sauces or Pastes

1) Definition

Soy sauces or pastes refer to products manufactured or processed by fermenting raw materials derived from animal or plant source with *Aspergillus* or fermenting or ripening meju (fermented soybeans) with salt and include meju, Korean style soy sauce, brewed soy sauce, acid-hydrolyzed soy sauce, enzyme-hydrolyzed soy sauce, mixed soy sauce, Korean soybean paste, soybean paste, seasoned soybean paste, gochujang (soy paste with red peppers), seasoned soy paste with red peppers, chunjang (black-colored soy paste), cheonggukjang (ground fermented soybean), and mixed paste.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) After fermentation or neutralization, the undiluted soy sauce shall be filtered to remove any soy sauce cake.

(2) Filtered soy sauce, mixed with seasoning ingredients, food additives, and others, should be handled in a manner to prevent any hazard such as mold.

(3) Alcoholic ingredient may be used to improve the taste or flavor or remove smells during the manufacture process.

(4) Monascus pigment shall not be used in the manufacture of soy paste with red peppers. Citrinin shall not be detected.

4) Food Types

(1) Meju (fermented soybeans)

① Korean style meju

Korean style meju refers to a product made by steaming or boiling soybeans, and molding and fermenting them.

② Improved meju

Improved meju refers to a product made by steaming or boiling soybeans and fermenting them with selected seed culture.

(2) Korean Style Soy Sauce

① Traditional Korean style soy sauce

Traditional Korean style soy sauce refers to soy sauce made by mixing Korean style meju with saline solution, fermenting and ripening it and processing the filtrate.

② Improved Korean style soy sauce

Improved Korean style soy sauce refers to a product made by mixing improved meju with saline solution, fermenting and ripening it and processing the filtrate.

(3) Brewed Soy Sauce

Brewed soy sauce refers to a product made by mixing soybean, defatted soybean and grain with saline solution and fermenting and ripening them with *Aspergillus* and processing the filtrate.

(4) Acid-hydrolyzed Soy Sauce

Acid-hydrolyzed Soy Sauce refers to a product made by hydrolyzing raw materials containing protein with acid and processing the filtrate.

(5) Enzyme-hydrolyzed Soy Sauce

Enzyme-hydrolyzed soy sauce refers to a product made by hydrolyzing raw materials containing protein with enzyme and processing the filtrate.

(6) Mixed Soy Sauce

Mixed soy sauce refers to a product made by mixing soy sauce or Korean style soy sauce with acid-hydrolyzed soy sauce or enzyme-hydrolyzed soy sauce, by processing the filtrate after fermenting crude acid-hydrolyzed soy sauce with protein or carbohydrate source or by processing the mixture of crude soy sauce or acid-hydrolyzed soy sauce and the crude solution.

(7) Korean Soybean Paste

Korean soybean paste refers to a product made by adding saline solution to Korean style meju, fermenting it, and separating the filtrate.

(8) Soybean Paste

Soybean paste refers to a product made by mixing soybean, rice, barley, wheat or defatted soybean with edible salt and fermenting and ripening them with *Aspergillus* or fermenting meju in saline solution, separating the filtrate and processing it.

(9) Seasoned soybean paste

Seasoned soybean paste refers to a product made by using the soybean paste (not less than 90%) as a main material and adding foods or food additives to it.

(10) Gochujang (soy paste with red peppers)

Gochujang(soy paste with red peppers) refers to a product made by using soybeans or grains as main material and cultivating *Aspergillus*. Then it is fermented and ripened after adding powdered red pepper (not less than 6%), salt etc or powdered red pepper (not less than 6%), salt etc is added to it after the fermentation process.

(11) Seasoned gochujang (seasoned soy paste with red peppers)

Seasoned soy paste with red peppers refers to a product by with gochujang (not less than 90%) as the main material and adding foods or food additives to it.

(12) Chunjang (black-colored soy paste)

Black-colored soy paste refers to a product made by fermenting the soybeans, rice, barley, wheat, or fat-free soybeans with *Aspergillus*, and adding salt, caramel colors, and others, then fermenting and ripening, or by adding salt, caramel colors, and others after ripening.

(13) Cheonggukjang (ground fermented soybean)

Ground fermented soybean refers to soybean paste, pill, or powder made by fermenting soybeans with *Bacillus* spp. or by adding the powdered red peppers, garlic, and others to such fermented soybeans.

(14) Mixed paste

Mixed paste refers to a product made by mixing the soy sauce, soybean paste, soy paste with red peppers, black-colored soy paste, and/or ground fermented soybean, or adding foods or food additives to such mixture (soy sauces or pastes: more than 50%).

(15) Others

Soy sauce, soybean paste or soy paste with red peppers not specified in (2) ~ (11) above.

5) Specifications

(1) Total nitrogen (w/v%) : Not less than 0.8 (Limited to soy sauce; not less than 0.7 for Korean style soy sauce)

(2) Tar color : Shall not be detected

(3) Coliform group : Negative [Limited to mixed paste (pasteurized product)]

(4) Preservatives (g/kg; g/L for soy sauce) : Shall not be detected except those specified in the followings.

Sorbic acid Potassium sorbate Calcium sorbate	Not more than 1.0 (as sorbic acid; limited to Korean soybean paste, soybean paste, seasoned soybean paste, soy paste with red peppers, seasoned soy paste with red peppers, black-colored soy paste, ground fermented soybean(limited to non-dried products) and mixed paste)
Benzoic Acid Sodium Benzoate Potassium Benzoate Calcium Benzoate	Not more than 0.6 (Limited to soy sauce. If it is used in combination with ethyl-p-hydroxy-benzoate and methyl-p-hydroxy-benzoate, the total amount used as benzoic aicd and parahydroxybenzoate shall not be more than 0.6 g/kg. Among these, the amount used as methyl parahydroxybenzoate shall not be more than 0.25 g/kg.)
Methyl *p*-Hydroxybenzoate Ethyl *p*-Hydroxybenzoate	Not more than 0.25 (Limited to soy sauce. If it is used in combination with benzoic acid, sodium benzoate, potassium benzoate and calcium benzoate, the total amount used as parahydroxybenzoate and as benzoic acid shall not be more than 0.6 g/kg. Among these, the amount used as parahydroxybenzoate shall not be more than 0.25 g/kg.)

6) Test Method

In case of powdered products, a sample should be diluted with distilled water depending on an indicated concentration or dilution factor.

(1) Total Nitrogen

Add water to 10 mL of sample to a total volume of 100 mL and 20 mL of it is used for the test. It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Tar color

It shall be tested according to 2.4 Coloring Agent in Article 9. General Testing Methods.

(3) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(4) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

21. Seasonings

Seasonings refer to products used in stimulating the savor in manufacturing, processing or cooking dishes; they include vinegars, sauces, tomato ketchup, curry, powdered red pepper or shredded red pepper, spice products, composite seasonings, etc.

21-1Vinegars

1) Definition

Vinegar refers to brewed vinegar that is manufactured by fermenting grains, fruits or alcoholic drinks, or by mixing and ripening them with grain-saccharified solution or fruit juice, or diluted acetic acid that is manufactured by diluting glacial acetic acid or acetic acid with drinking water.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Brewed vinegar and diluted acetic acid shall not be mixed.

4) Food Types

(1) Brewed vinegar

Brewed vinegar refers to a solution produced by acetic acid fermentation with fruit mash (main) and pressed fruit juice, grain-saccharified solution, ethanol and sugars and by addition of grain-saccharified solution or fruit juice to them and mixing and ripening them. Among these, the fermented liquid of persimmon using acetic acid is called persimmon vinegar.

(2) Diluted acetic acid

Diluted acetic acid refers to a solution produced by diluting glacial acetic acid or acetic acid with drinking water.

(3) Other vinegars

Vinegars unspecified in (1) ~ (2) above.

5) Specifications

(1) Total Acid (as acetic acid; w/v%) : 4.0 ~ 20.0 (more than 2.6 for persimmon vinegar)

(2) Tar color : Shall not be detected

(3) Preservatives (g/L) : Shall not be detected except those specified in the followings.

Methyl *p*-Hydroxybenzoate Ethyl *p*-Hydroxybenzoate	Not more than 0.1 (as *p*-Hydroxybenzoate)

6) Test Method

(1) Total Acid

Get a 10 mL sample and add some distilled water, which has been boiled and cooled, to a total volume of 100 mL, take the 20 mL out of it and titrate it with 0.1 N sodium hydroxide by using phenolphthalein solution, as the indicator.

0.1N sodium hydroxide 1 mL = 0.006 g CH_3COOH

(2) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(3) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

21-2 Sauces

1) Definition

Sauces refer to products produced by adding spices, fermented pastes, sugars, edible salt, vinegars etc. to animal or vegetable substances, or it is followed by fermenting and ripening, which are used to increase tastes before and after cooking. However, products of which standards and specifications are defined otherwise are excluded.

2) Requirements of Raw Material

(1) Alcoholic components can be used for the purpose of improving the flavors.

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Coliform group : Shall be negative.

(2) Bacterial count: Shall be negative (Limited to sterilized products)

(3) Tar color : Shall not be detected

(4) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Methyl *p*-Hydroxybenzoate Ethyl *p*-Hydroxybenzoate	Not more than 0.2 (as *p*-Hydroxybenzoate)

6) Test Method

(1) Coliform group

It shall be tested according to 3.7. Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(2) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(4) Preservatives

It shall be tested according to 2.1 Preservatives in Article-9. General Testing Methods.

21-3 Tomato Ketchup

1) Definition

Tomato ketchup refers to a product produced by adding sugars, vinegar, edible salt, spices and citric acid to tomato or concentrated tomato (20% or more based on 25% of soluble solid content) as the main material.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Tar color : Shall not be detected

(2) Coliform group : Shall be negative

(3) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic Acid Potassium Sorbate Calcium sorbate	Not more than 0.5 (as sorbic acid)

6) Test Method

(1) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(2) Coliform group

Put 50 g of sample into sterilized diluted solution, add sterilized phosphate buffered dilution water or sterilized saline solution to a total volume of 500 mL. Put the mixture into a mixer for 15 minutes to homogenize and take the homogenized solution as the test solution. After then, the 10 mL, 1 mL and 1 mL of x10 diluted solution shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

21-4 Curry

1) Definition

Curry refers to curry powder made of spices or added with foods or food additives to it

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Curry powder

Curry powder refers to a product made of drying and powdering natural spices, such as turmeric, ginger, coriander, cumin, etc.

(2) Curry

Curry refers to a product made of the curry powder added with food or food additives (5% or more curry powder in case of solid or powdered products; 1% or more curry powder in liquid products).

5) Specifications

(1) Tar color : Shall not be detected

(2) Bacterial count : Shall be negative (Limited to liquid products)

(3) Coliform group : Shall be negative (Limited to liquid products)

6) Test Method

(1) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(2) Bacterial count

Wash the container of the sample with cotton of 70% alcohol, open it with a pasteurized tool, take 10 g of sample sterilely into a sterile bottle, add sterilized phosphate buffered dilution water or sterilized saline solution to make a total volume of 100 mL and put the stopper in the opening and mix it by shaking. Take it as the sample and test it according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Coliform group

Take the test solution made in (2) above, and test it according to 3.7.3 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

21-5 Red Pepper Powder or Shredded Red Pepper

1) Definition

Red pepper powder or shredded red pepper refers to chopped/shredded or powdered dried fruits of red pepper or the variants related to eggplant family.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Other materials (such as salt, sugars, brans, carbonate, starch, etc.) except red pepper seeds included in the red peppers shall not be added for the manufacture of red pepper powder.

(2) Only red pepper seeds included in red peppers materials may be used for the manufacture of red pepper powder. Red pepper seeds shall not be separately added for the manufacture of red pepper powder.

(3) Stalks (except calyces) of red peppers shall be removed for the manufacture of red pepper powder. For diseased red peppers, the diseased parts shall be removed before use.

(4) Red pepper powder shall be packed into packaging materials or containers, such as aluminum-filmed material, PE bottle, glass material, etc., which meet the standards and specifications for utensils, containers, and packaging materials. Packing process shall be conducted as soon as possible and finished products shall be protected from humidity and sunlight to prevent deterioration and microbial contamination.

(5) Apparatus for removing foreign materials shall be installed at the production line in the manufacture of red pepper powder.

4) Food Types

(1) Powdered red pepper

Powdered red pepper refers to a powdered - dried fruits of red pepper or the variants of it belonging to eggplant family.

(2) Shredded red pepper

Shredded red pepper refers to a chopped/shredded - dried fruits of red pepper or the variants of it belonging to eggplant family.

5) Specifications

(1) Moisture (%) : Not more than 15.0

(2) Ash (%) : Not more than 7.0

(3) Acid-insoluble ash (%) : Not more than 0.5

(4) Adulterant : Shall not be detected (such as starch, brans, carbonate, salt, etc.)

(5) Mold counts (%) : Not more than 20 (Positive ratio based on Howard Mold Counting Apparatus; Except shredded red pepper)

(6) Tar color : Shall not be detected

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

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Ash

Weigh a 2~4 g sample accurately and test it according to 1.1.2 Ash, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Acid-insoluble ash

Add 25 mL 10% hydrochloric acid to the ash obtained in the above ash test, boil it for 5 minutes, filter the insoluble substances with quantitative filter paper, wash the remaining in a water bath, dry it out, make it ash and take the ash as acid-insoluble ash.

(4) Adulterant

① Starch

Add 10 mL water to a 1 g sample, boil it for 1 ~ 2 minutes quietly, cool it down, add 2~3 drops of 0.1 N iodine solution to the supernatant and shake it until well mixed. If it turns blue-purple noticeably while mixing, it means that starch exists in the mixture. Otherwise, it can be checked by a microscope.

② Bran

If xanthogranuloma or stone cells are found when taking a small quantity of sample and observing it with a microscope, it may be suspected that it has adulterated to bran. Therefore, it should be checked.

③ Carbonate

If white mass is observed under a microscope and if it is melted forming a form when 10% hydrochloric acid is added, it is suspected of containing carbonate.

④ Edible Salt

It shall be tested according to 1.2.1.5 Edible Salt, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(5) Mold count

It shall be tested according to 9.7 Mold Counts in Article 9. General Testing Methods.

(6) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(7) *Escherichia coli*

It shall be tested according to 3.8 *Escherichia coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

21-6 Spice Products

1) Definition

Spice products refer to the types of spices produced by processing leaves, stems, fruits and roots of flavoring plants used for spices or by adding foods or additives to the former one, which are used to enhance the flavor of other food. Products of which specifications are defined otherwise are excluded.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) For natural spice, foods or food additives other than spicing plant parts shall not be added.

(2) Monascus pigment shall not be used in the manufacture of spice products containing red pepper or red pepper powder, Citrinin shall not be detected.

4) Food Types

(1) Natural Spice

Natural spice refers to a product produced by processing, such as powdering, the spice plants.

(2) Spice Formula

Spice formula refers to a spice product produced by mixing other foods or additives to the natural spices and processing the mixture.

5) Specifications

(1) Adulterant : Shall not be detected (Limited to natural spice products)

(2) Tar color : Shall not be detected (Excluding processed horseradish or mustard products)

(3) Coliform group : n=5, c=2, m=0, M=10 (Limited to pasteurized products)

(4) *Escherichia coli* : n=5, c=2, m=0, M=10 (Excluding pasteurized or dried products)

(5) Mold counts (%) : Not more than 10 (positive ratio based on Howard Mold Counting Apparatus; limited to red pepper or red pepper containing products)

6) Test Method

(1) Adulterant

① Wheat Flour

When observing it with a microscope, it can be seen that pepper starch is very small and the diameter is about 3 μm but wheat flour is approximately 5~50 μm, which is not proven yet.

② Carbonate

If white mass is observed under a microscope and if it is melted forming a form when 10% hydrochloric acid is added, it is suspected of containing carbonate.

③ Indian long pepper (Only to pepper powder)

㉮ Qualitative analysis by Gas Chromatography

Ⓐ Reagent

- n-Heptadecane standard solution : Prepare 0.5 mg/mL n-Heptadecane standard solution by dissolving n-Heptadecane to n-nucleic acid.
- Stationary phase : W Chromosorb or Gas Chrome Q (60~100 mesh)
- Column filler : coat a solid support with 3~5% SP-2100 or 5~10% SE-30

Ⓑ Device

- Detector : Flame ionization detector (FID)
- Column : Glass or stainless steel tube (3~4 mm × 1~2 m)

Ⓒ Preparation of Test Solution

Weigh a 10 ~ 20 g sample, put it into an Erlenmeyer flask and extract it by inserting n-nuclear acid as much as a sample could be soaked. Filter the extracted solution and take it as the test solution.

(example of measuring conditions)

- Temperature of inlet : 230~250˚C
- Column temperature : 120~150˚C
- Detector's temperature : 250˚C

Ⓓ Test Procedure

Insert the 1~3 μL of test solution and standard solution each to Gas Chromatography and quantitatively analyze it by comparing the retention time of a peak obtained by the above.

(2) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(3) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(4) *Escherichia coli*

It shall be tested according to 3.8 *Escherichia coli*. 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Mold counts

It shall be tested according to 9.7 Mold Counts in Article 9. General Testing Methods.

21-7 Composite Seasonings

1) Definition

Composite seasonings refer to a products that are used to give food unique taste and flavor and made by adding sugars, edible salt, spices, protein-hydrolyzed substance, yeast or its extract, food additives,-etc. to food and processed to become powder, granule or solid form.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Moisture (%) : Not more than 8.0

(2) Tar color : Shall not be detected

(3) *Escherichia coli* : Shall be negative

6) Test Method

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(3) *Escherichia coli.*

It shall be tested according to 3.8 *Escherichia coli,* 3. Microbiological Methods in Article 9. General Testing Methods.

22. Dressings

1) Definition

Dressings refer to products used to improve or enhance tastes and flavors of food in manufacturing, processing and cooking food. Edible salt, sugars, spices, eggs and additives are added to the main materials, such as edible oil and vinegar, and they are emulsified or manufactured in the form of separate liquid or vegetables, fruits, or others added to them. They include dressing and mayonnaise.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Dressing

It refers to an emulsified and homogenized dressing in semi-solid or liquid state or in separate liquid state. It does not include mayonnaise.

(2) Mayonnaise

Mayonnaise refers to a dressing made of egg yolk or whole egg, oil (65% or more of vegetable oil), vinegar or fruit juice, egg yolk, egg white, protein-hydrolyzed substance, edible salt, sugar, spices, seasoning (amino acid, etc.), acidulants, antioxidants, etc.

5) Specifications

Type / Category	Dressing	Mayonnaise
(1) Crude fat (%)	Not less than 10	Not less than 65
(2) Coliform group	Shall be negative	

6) Test Methods

In case of separate liquid type dressing, shake properly and homogenize it for preparing a sample; if dressing with vegetable pieces, homogenize it by using a mixer for 15 minutes.

(1) Crude Fat

It shall be tested according to 1.1.5.1 Crude Fat, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

23. Kimchies

1) Definition

Kimchi refers to kimchisok, Chinese cabbage Kimchi, etc. that are manufactured by using vegetables, such as Chinese cabbage, as the main materials and processed by salting, seasoning with or without fermentation.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Vegetables to be used in the manufacturinge of kimchi shall be sufficiently washed to remove foreign materials.

4) Food Types

(1) Kimchisok (seasoned materials for kimchi)

Kimchisok refers to a product made by adding red pepper powder, sugar, and salt to vegetable materials and mixing them. It is used in the manufacturing of kimchi.

(2) Chinese cabbage kimchi

Chinese cabbage kimchi refers to a product manufactured by using Chinese cabbage as the main materials and processed by salting, seasoning with or without fermentation.

(3) Other kimchi

Other kimchies refer to products manufactured by using vegetables as the main materials and processed by salting, seasoning with or without fermentation and excludes Chinese cabbage kimchi.

5) Specifications

(1) Lead (mg/kg) : Not more than 0.3

(2) Cadmium (mg/kg) : Not more than 0.2

(3) Tar color : Shall not be detected.

(4) Preservatives : Shall not be detected.

(5) Coliform group : Shall be negative (Limited to pasteurized packaged products)

6) Test Methods

(1) Lead and cadmium

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(2) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(3) Preservatives

It shall be tested according to 2.1. Preservatives in Article 9. General Testing Methods.

(4) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

24. Salted and Fermented Seafoods (Jeotkal)

1) Definition

Salted and fermented seafoods refer to seafood products manufactured by fermenting fish, crustacea, Mollusca, Echinodermata, etc. partially or wholly with edible salt or by adding other foods or additives to the filtrate of such fermented one; it normally contains salted and fermented seafoods, spiced salted and fermented seafoods, Joet, spiced/seasoned Jeot and Sikhae.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Water (including saline solution) shall not be added to increase the weight (except spiced/seasoned jeot).

(2) In the manufacture of changranjeot (salted and fermented pollack tripe), the scrubbing, washing, and light-based inspection (examination of foreign materials) shall be employed.

(3) Utensils shall be treated in a sanitary manner to prevent rust.

4) Food Types

(1) Salted and fermented seafood

Salted and fermented seafood refers to a product manufactured by fermenting and ripening fish, crustaceans, mollusks, echinoderms, etc. (60% or more; based on fresh-weight) partially or wholly with edible salt.

(2) Spiced salted and fermented seafood

Spiced salted and fermented seafood refers to a product manufactured by spicing jeotkal with hot pepper powder, seasonings and others.

(3) Jeot

Jeot refers to liquid filtrated or separated liquid from salted and fermented seafood or the product manufactured by re-fermenting and re-ripening the remains of the filtration and then mixed with the filtrated or separated liquid.

(4) Spiced/seasoned jeot

Spiced/seasoned jeot refers to a product manufactured by adding salt water or seasonings to it.

(5) Sikhae

Sikhae refers to a product manufactured by adding edible salt, cereals, etc. to fish, crustaceans, mollusks, echinoderms, etc. (60% or more; based on fresh-weight) partially or wholly and fermenting and ripening it.

5) Specifications

(1) Total Nitrogen(%) : Not less than 1.0 for jeot, (Not less than 0.8 for jeot with fermented *Neomysis awatschensis*),
Not less than 0.5 for spiced/seasoned jeot

(2) Coliform group : Shall be negative (Limited to jeot and spiced/seasoned jeot)

(3) Tar color : Shall not be detected (Excluding salted Alaska pollack roe)

(4) Preservatives (g/kg) : Shall not be detected except those specified in the followings. (Limited to products in which edible salt is contained not more than 8%)

Sorbic Acid Potassium Sorbate Calcium sorbate	Not less than 1.0 (as sorbic acid)

(5) *Escherichia coli.*: Shall be negative (Excluding jeot and spiced/seasoned jeot)

6) Test Method

(1) Total Nitrogen

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(4) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

(5) Edible salt

It shall be tested according to 1.2.1.5 Edible Salt, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(6) *Escherichia coli.*

It shall be tested according to 3.8 *Escherichia coli.*, 3. Microbiological Methods in Article 9. General Testing Methods.

25. Pickles

1) Definition

Pickles refer to products manufactured by pickling vegetables, fruits, seasonings, edible wild plants, marine products and others with edible salt, vinegar, sugars or soy sauce and pastes or by adding other foods or additives to the former products. The products of which specifications are defined otherwise are excluded.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Pickled food

Pickled food refers to a product made by salting main ingredients with salt, soy sauce or paste, or vinegar or mixing them and then treating them with spices. It includes salt-pickled food, soy sauce-pickled food, vinegar-pickled food, etc.

(2) Sugaring food

Sugaring food refers to a product manufactured by pickling the main ingredients with sugars such as honey, sugar, etc. or after then, adding other foods or additives to the mixture; if water content is not more than 10%, it is called dried sugaring products.

5) Specifications

(1) Bacterial count : n=5, c=0, m=0 (Limited to sterilized products)

(2) Coliform group : n=5, c=1, m=0 M=10 (Limited to pasteurized products)

(3) Tar color : Shall not be detected (Excluding sealed and heat pasteurized or sterilized, pickled cucumber, pickled ginger and pickled Japanese apricot)

(4) Sulfur dioxide (g/kg) : Not more than 0.030 (Limited to dried sugaring products)

(5) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic Acid Potassium Sorbate Calcium sorbate	Not more than 1.0 (as sorbic acid; excluding sugaring products and vinegar-preserved products)
	Not more than 0.5 (as sorbic acid; limited to sugaring products (excluding dried sugaring products))

	Not more than 0.5 (limited to vinegar-preserved products. If it is used in combination with benzoic acid, sodium benzoate, potassium benzoate and calcium benzoate, the total amount used as sorbic acid and as benzoic acid should not be more than 1.5 g/kg. Among these, the amount used as sorbic acid shall not be more than 0.5 g/kg)
Benzoic Acid Sodium Benzoate Potassium Benzoate Calcium Benzoate	Not more than 1.0 (limited to vinegar-preserved products. If it is used in combination with sorbic acid, potassium sorbate and calcium sorbate, the total amount used as benzoic acid and as sorbic acid shall not be more than 1.5 g/kg. Among these, the amount used as sorbic acid shall not be more than 0.5 g/kg)

(6) *Escherichia coli.*: n=5, c=1, m=0, M=10 (Excluding pasteurized products)

6) Test Methods

(1) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(2) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(4) Sulfur dioxide

It shall be tested according to 2.5 Sulfurous, Hyposulfite and Their Salts in Article 9. General Testing Methods.

(5) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

(6) *Escherichia coli.*

It shall be tested according to 3.8 *Escherichia coli.*, 3. Microbiological Methods in Article 9. General Testing Methods.

26. Hard-boiled Foods

1) Definition

Hard-boiled foods refer to products manufactured by adding edible salt, soy paste/sauces, sugars, etc. to animal · vegetable ingredients and boiling down or stir-frying them with heat or processing them through seasoning.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Hard-boiled Agricultural Product

Hard-boiled agricultural product refers to a product manufactured by adding edible salt, soy sauce or paste, sugars, etc. to agricultural products and boiling or stir-frying it.

(2) Hard-boiled Fishery Product

Hard-boiled fishery product refers to a product manufactured by adding edible salt, soy sauce or paste, sugars, etc. to fishery products and boiling or stir-frying it.

(3) Hard-boiled Livestock Product

Hard-boiled livestock product refers to a product manufactured by adding salt, soy sauce or paste, sugar, etc. to livestock products and boiling or stir-frying it.

5) Specifications

(1) Bacterial count : Shall be negative (Limited to sterilized products)

(2) Coliform group : Shall be negative(Limited to pasteurized or sterilized products)

(3) Tar color : Shall not be detected

(4) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic Acid Potassium Sorbate Calcium sorbate	Not more than 1.0 (as sorbic acid; only to lees such as red bean, etc.)

6) Test Method

(1) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(2) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(4) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

27. Alcoholic Beverages

Alcoholic beverages refer to alcoholic liquors, which are manufactured by fermenting grain, potatoes, fruits and/or starches, specified in the Liquor Tax Law; they contain brewed alcoholic liquor and spirits distilled alcoholic liquor etc.

27-1 Takju (Korean Turbid Rice Wine)

1) Definition

Takju (Korean turbid rice wine) refers to a product that is turbidly manufactured of mother brew fermenting raw starchy materials and Koji as its main materials.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Total Acid (w/v%) : Not more than 0.5 (as Acetic acid)

(3) Methanol (mg/ mL) : Not more than 0.5

(4) Fungal count : Shall be negative (Limited to pasteurized product)

(5) Preservatives : Shall not be detected

6) Test Methods

(1) Ethanol

Conform to the Liquior Tax Law.

(2) Total Acid

Add 30 mL of water, which has been boiled and cooled, to 20 mL of sample and titrate it with 0.1N sodium hydroxide. For the indicator, use the neutral red · BTB mixture reagent. Add 30 mL of water, which has been boiled and cooled, to 20 mL of sample.

$$\text{Total acid (w/v \%)} = \frac{0.006 \times V \times f}{S} \times 100 \text{ (as acetic acid)}$$

V : consumption of 0.1N NaOH (mL)

f : factor of 0.1N NaOH

S : sampling amount (mL)

(3) Methanol

① Fuchsin(e) sulfite

Ⓐ Reagents

ⓐ Potassium permanganate solution

Add water to 75 mL phosphoric acid to make a total volume of 500 mL and melt 15 g potassium permanganate in it

ⓑ Oxalic acid solution

Add water to the same amount of sulfuric acid, cool it down and take 500 mL of the mixture and melt 25 g oxalic acid in it.

ⓒ Fuchsin(s) sulfite solution

(a) Melt 0.5 g basic fuchsin(s) to 300 mL hot water and cool it down.

(b) Melt 5 g sodium sulfate anhydrous to 50 mL water. While stirring (b) solution, add it to (a). After then, mix 5 mL hydrochloric acid and stir it. Dilute the mixture with water, and make the total volume of 500 mL. After leaving it for 5 hours upon the preparation, use it. Store the reagent into a brown bottle and preserve it in a cool and dark place.

Ⓑ Test

Add 15 mL of water to the 100 mL sample and distill it to get the 100 mL solution, take 10 mL of it and add 40 mL water and use it as the test solution.

Put the 5 mL test solution and standard colorimetric methanol solution to two test tubes of which shapes are not different, add 2 mL potassium permanganate and leave the mixture for 15 minutes. After then, add 2 mL oxalic acid solution to them to discolor potassium permanganate.

Once it is discolored completely, add 5 mL fuchsin(s) sulfite solution to each test tube, shake them, leaving them for half an hour at ambient temperature and comparing the color

of the sample to that of standard solution, follow by the below table or calculate the content of methanol in a sample by measuring the absorbance at 585 nm. The amount of methanol (mg) contained in 1 mL of the sample is equivalent to the value calculated by multiplying the amount of methanol (mg) in 1 mL of the sample solution by 5.

Standard Colorimetric Methanol Solution

Mixture rate / No.	0.1% Methanol (mL)	95% Methanol (mL)	Water (mL)	Methanol contained in 1 mL sample (mg)
1	0.05	0.25	4.70	0.01
2	0.10	0.25	4.65	0.02
3	0.15	0.25	4.60	0.03
4	0.20	0.25	4.55	0.04
5	0.30	0.25	4.45	0.06
6	0.40	0.25	4.35	0.08
7	0.50	0.25	4.25	0.10
8	0.60	0.25	4.15	0.12
9	0.75	0.25	4.00	0.15
10	1.00	0.25	3.75	0.20
11	1.25	0.25	3.50	0.25
12	1.50	0.25	3.25	0.30
13	1.75	0.25	3.00	0.35
14	2.00	0.25	2.75	0.40
15	2.50	0.25	2.25	0.50

② Gas chromatography

Ⓐ Reagents

ⓐ Internal Standard : Prepare n-butyl alcohol to make the final concentration of 10~100 mg/L.

ⓑ Methanol Standard : Dissolve methanol (special grade) in water to make the final concentration of 10~100 mg/L.

Ⓑ Test

Take the sample solution into 100 mL measuring flask calibrated at 15˚C, transfer the sample solution to about 300~500 mL flask, wash the measuring flask with water of

about 15 mL two times, add the water to the flask, connect it to a condenser, and distilled it with use of the measuring flask for collection. When 70 mL of water is left (about 20 minutes), stop the distillation, add the internal standard to make the final concentration of 10~100 mg/L, add water to the measuring flask calibrated at 15˚C to the full, and shake it. This solution is used as test solution. Inject 1-5 μL of test solution into a gas chromatograph, obtain the height or area of the methanol peak from the chromatogram, and calculate the content of methanol with use of a standard curve previously made according to the same procedures with methanol standard solutions.

Ⓒ Operating conditions

ⓐ Instrument : Gas chromatograph Flame Ionization detector (FID)

ⓑ Column : Capillary column coated with polyethylene glycol, 50 m× 0.2 mm × 0.3 μm, or other equivalent column

ⓒ Column Temperature : 60~150˚C

ⓓ Injector Temperature : 150~200˚C

ⓔ Detector Temperature : 150~200˚C

ⓕ Carrier gas : N_2 or He

ⓖ Flow rate of carrier gas : 1 mL/min

(4) Fungal count

It shall be tested according to 3.10 Fungal Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

27-2 Yakju (Korean Cleared Rice Wine)

1) Definition

Yakju(Korean cleared rice wine) refers to a product that is filtered and manufactured of mother brew fermenting raw starchy materials and Koji as its main materials.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Total Acid (w/v%) : Not more than 0.7(as Acetic acid)

(3) Methanol (mg/mL) : Not more than 0.5

(4) Fungal count : Shall be negative (Limited to pasteurized products)

(5) Preservatives (g/L) : Shall not be detected

6) Test Method

(1) Ethanol

Conform to the Liquor Tax Law.

(2) Total acid

It shall be tested according to (2) Total Acid, 6) Test Methods in 27-1 Takju (Korean turbid rice wine).

(3) Methanol

It shall be tested according to (3) Methnol, 6) Test Methods d in 27-1 Takju (Korean turbid rice wine).

(4) Fungal count

It shall be tested according to 3.10 Fungal Count (Yeast and Mold Count), 3. Microbiological Methods in Article 9. General Testing Methods.

(5) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

27-3 Sake

1) Definition

Sake refers to a product that is filtered and manufactured of mother brew fermenting raw starchy materials and Koji as its main materials or adding alcoholic beverages, etc. to it during the brewing procedure.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Total Acid (w/v%) : Not more than 0.3(as succinic acid)

(3) Methanol (mg/mL) : Not more than 0.5

6) Test Method

(1) Ethanol

Conform to the Liquor Tax Law.

(2) Total Acid

It shall be tested according to (2) Total Acid, 6) Test Methods in 27-1 Takju (Korean turbid rice wine).

However, note that 1 mL 0.1 N sodium hydroxide solution = 0.0059 g succinic acid.

(3) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean turbid rice wine).

27-4 Beer

1) Definition

Beer refers to a product manufactured by fermenting malt or malt and raw starchy materials and hop as its main materials and filtering them.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 0.5

6) Test Methods

(1) Ethanol

Conform to the Liquor Tax Law.

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean turbid rice wine).

27-5 Fruit Wine

1) Definition

Fruit wine refers to a product that is filtered and manufactured of mother brew fermenting fruits or fruit juices as its main materials, or adding fruit, sugars or alcoholic beverages to it.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 1.0

(3) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Sorbic Acid Potassium Sorbate Calcium sorbate	Less than 0.2(as sorbic acid)

(4) Lead (mg/kg) : Less than 0.2 (Limited to wines)

6) Test Methods

(1) Ethanol

Conform to the Liquor Tax Law.

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean turbid rice wine).

(3) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

27-6 Soju (Korean Distilled Liquor)

1) Definition

Soju (Korean distilled liquor) refers to a product which is manufactured by distilling mother brew fermenting raw starchy materials and Koji or is manufactured by diluting the alcohol with water or by adding alcoholic beverages or grain alcohol to it.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 0.5

(3) Aldehyde (mg/100 mL) : Not more than 70.0

6) Test Method

(1) Ethanol

Conform to the Liquor Tax Law.

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean turbid rice wine).

(3) Aldehyde

Add 45 mL water to a 5 mL sample, put the mixture in a bottle, add 0.01 N sodium bisulfite corresponding to 10 mL 0.01 N iodine solution, shake it and plug it with a stopper. After then, leave it for half an hour, put 10 mL 0.01 N iodine solution, add 2~3 drops of starch solution and titrate it with 0.01 N sodium thiosulfate until the blue purple color disappears.

Content of aldehyde in a 100 mL sample (mg) = $a \times f \times 0.22 \times \frac{100}{5}$

a : Amount of 0.01 N sodium thiosulfate(mL) in titration

f: Factor of 0.01 N sodium thiosulfate solution

1 mL 0.01 N sodium thiosulfate = 0.22 mg aldehyde

27-7 Whiskey

1) Definition

Whiskey refers to spirits manufactured by distilling germinated grain or fermented mother brew with grain, then ripening it in a wooden container or adding alcoholic beverages to it.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 0.5

(3) Aldehyde (mg/100 mL) : Not more than 70.0

6) Test Method

(1) Ethanol

Conform to the Liquor Law

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean Turbid Rice Wine).

(3) Aldehyde

It shall be tested according to (3) Aldehyde, 6) Test Methods in 27-6 Soju (Korean Distilled Liquor).

27-8 Brandy

1) Definition

Brandy refers to spirits manufactured by distilling fruit wine (including fruit residues) or mother brew that is fermented with fruit(including fruit juice) or sugars with it and then ripening it in a wooden container or adding alcoholic beverages to them.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 1.0

(3) Aldehyde (mg/100 mL) : Not more than 70.0

6) Test Method

(1) Ethanol

Conform to the Liquor Law

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean Turbid Rice Wine).

(3) Aldehyde

It shall be tested according to (3) Aldehyde, 6) Test Methods in 27-6 Soju (Korean Distilled Liquor).

27-9 General Distilled Liquor

1) Definition

General distilled liquor refers to spirits manufactured by fermenting and distilling starchy substances or sugars or mixing spirits, which do not belong to alcohol, Soju, Whiskey and Brandy, and that are specified in the Liquor Tax Law.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 0.5 (However, not more than 1.0 for products with Agave (*Agave tequilana*) as the main material)

(3) Aldehyde (mg/100 mL) : Not more than 70.0

6) Test Method

(1) Ethanol

Conform to the Liquor Law

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean Turbid Rice Wine).

(3) Aldehyde

It shall be tested according to (3) Aldehyde, 6) Test Methods in 27-6 Soju (Korean Distilled Liquor).

27-10 Liqueur

1) Definition

Liqueur refers to alcoholic liquors manufactured by leaching ginseng, fruits (Excluding fruits to be fermented such as grapes), etc. into fermented or distilled alcoholic beverage that is made of starchy substances or sugars, or by adding extracts of ginseng, fruits (Excluding fruits to be fermented such as grapes), etc or substances that are specified in the Liquor Tax Law during fermentation, distillation processes of ethanol, soju (Korean distilled liquor) and general distilled liquor.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 1.0

6) Test Methods

(1) Ethanol

Conform to the Liquor Law

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean Turbid Rice Wine).

27-11 Other Liquors

1) Definition

Other liquors refer to alcoholic beverages of which specifications and standards are not established, but specified as alcoholic beverages in the Liquor Tax Law.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Ethanol (v/v%) : Conform to the Liquor Tax Law.

(2) Methanol (mg/mL) : Not more than 1.0

6) Test Methods

(1) Ethanol

Conform to the Liquor Law

(2) Methanol

It shall be tested according to (3) Methanol, 6) Test Methods in 27-1 Takju (Korean Turbid Rice Wine).

28. Dried Fish/Shellfish Fillets

1) Definition

Dried fish/shellfish fillets refer to dried fish(fish fillet) and dried shellfish or the processed one with spices and seasonings and includes seasoned dried fish/shellfish fillet, dried fish/shellfish fillet and other dried fish/shellfish fillet.

2) Requirements of Raw Material

(1) Raw fish and shellfish shall be preserved at no more than 5˚C.

(2) Raw fish and shellfish shall not contain any natural toxin that may be harmful to human body.

3) Manufacturing and Processing Standards

(1) If necessary, appropriate pasteurization or sterilization shall be conducted and products shall be packed in clean and sanitary containers or packaging materials.

4) Food Types

(1) Seasoned Dried Fish/Shellfish Fillet

Seasoned dried fish/shellfish fillet refers to processed fish/shellfish fillet through seasoning, drying, etc.

(2) Dried Fish/Shellfish Fillet

Dried fish/shellfish fillet refers to dried fish meat/shellfish or the chopped ones.

(3) Other dried Fish /Shellfish Fillet

Dried fish/shellfish fillet refers to those unspecified in the above (1) ~ (2).

5) Specifications

(1) Sulfur dioxide (g/kg) : Not more than 0.03

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

(3) *Staphylococcus aureus* : Not more than 100 per 1 g (Limited to seasoned dried fish fillet/shellfish)

(4) Preservatives (g/kg) : Shall not be detected except those specified in the followings. .

Sorbic Acid Potassium Sorbate Calcium sorbate	Not more than 1.0 (as sorbic acid)

6) Test Methods

(1) Sulfur dioxide

It shall be tested according to 2.5 Sulfurous, Hyposulfite and their salts in Article 9. General Testing Methods.

(2) *Esherichia coli.*

It shall be tested according to 3.8 Escherichia coli., 3. Microbiological Methods in Article 9. General Testing Methods.

(3) *Staphylococcus aureus*

It shall be tested according to 3.12.2 Quantitative Tests, 3.12 Staphylococcus aureus, 3. Microbiological Methods in Article 9. General Testing Methods.

(4) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

29. Other Foods

Other foods refer to other foods unspecified in the above 1. Confectioneries ~ 28. Dried Fish and Shellfish Fillets and includes the following foods.

29-1 Processed Peanut and Nut Products

1) Definition

Processed peanut and nut products refer to products produced by simply processing peanuts and nuts or by adding other foods or additives to them; it includes peanut butter and processed nut products.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Peanut Butter

Peanut butter refers to a product processed by roasting peanut, grinding and adding food and food additives to them.

(2) Processed Nut Product

Processed nut product refers to a product, whose main ingredient is nuts, processed by adding sugar, edible oil, etc. or food additives to nuts and/or peanuts.

5) Specifications

(1) Total aflatoxin (μg/kg) : Not more than 15.0 (As the sum of B_1, B_2, G_1 and G_2. However, not more than 10.0 μg/kg for B_1)

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

6) Test Methods

(1) Aflatoxin

It shall be tested according to 6.1 Mycotoxins in Article 9. General Testing Methods.

(2) *Salmonella* spp.

It shall be tested according to 3.1.1 *Salmonella* spp., 3. Microbiological Methods in Article 9. General Testing Methods.

29-2 Capsules

1) Definition

Capsule refers to a type of food produced by molding food additives such as gelatine, glycerin, etc. and food as food materials.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Disintegration test : Shall be suitable.

(2) pH : 3.0~7.5

(3) Arsenic (mg/kg) : Not more than 1.5

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

(5) Preservatives (g/kg) : Shall not be detected except those specified in the followings.

Methyl *p*-Hydroxybenzoate Propyl *p*-Hydroxybenzoate	Not more than 1.0 (as *p*-Hydroxybenzoate)

6) Test Methods

(1) Disintegration test

It shall be tested according to 9.6 Disintegration Test in Article 9. General Testing Methods.

(2) pH

Take 2 g of the sample, put it in a 100 mL Erlenmeyer flask, add 50 mL water into the flask, maintaining it at 37± 2˚C, melt it by shaking and measure it with pH meter.

(3) Arsenic

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(4) Heavy metals

It shall be tested according to 7.1.2.8 Heavy Metals, 7.1. Methods for Heavy Metals in Article 9. General Testing Methods.

(5) Preservatives

It shall be tested according to 2.1 Preservatives in Article 9. General Testing Methods.

29-3 Starches

1) Definition

Starches refer to powder products made by processes of grinding, screening and separation of raw starch.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) It shall not be mixed with different type of starch.

4) Food Types

(1) Starch

Starch refers to a powder product made of starchy substances from potatoes or sweet potatoes produced by processes of grinding, screening and separation.

(2) Other starch

Starch unspecified in above (1) food type.

5) Specifications

(1) Moisture (%)

① Potato starch : Not more than 20.0

② Sweet potato starch : Not more than 18.0

③ Other starch : Not more than 15.0

(2) Ash (%) : Not more than 0.4

(3) Acidity (consumption amount of 0.02 N sodium hydroxide) : Not more than 3 mL

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Ash

Weigh a 3~5 g sample accurately and test it according to 1.1.2 Ash, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Acidity

Weigh a 5 g sample accurately, add 20 mL distilled water to it and titrate the turbid solution with 0.02 N sodium hydroxide solution. For the indicator, use BTB (Brome-Thimol-Blue) reagent and the moment it turns dark blue is considered to be the end point.

29-4 Processed Fruit · Vegetable Products

1) Definition

Processed fruit · vegetable products refer to processed products, purėe, and pastes made by manufacturing or processing fruits or vegetables or adding food or food additives to fruits or vegetables (However, food for which standards and specifications is specified otherwise, refer to the standard).

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) *Escherichia coli.*: Shall be negative

(2) Tar color : Shall not be detected

6) Test Methods

(1) *Escherichia coli*

It shall be tested according to 3.8 *Escherichia coli,* 3. Microbiological Methods in Article 9. General Testing Methods.

(2) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

29-5 Seasoned Laver

1) Definition

Seasoned laver refers to a laver product produced by processing dry lave r(including rare-roasted laver), which is oil-treated or not, with seasonings or edible salt.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Acid value : Not more than 4.0 (Limited to laver treated with oil)

(2) Peroxide value : Not more than 60.0 (Limited to laver treated with oil)

(3) Tar color : Shall not be detected

6) Test Methods

(1) Acid Value

It shall be tested according to (2) Acid Value, 6) Test Methods in 1. Confectioneries.

(2) Peroxide Value

The same fat prepared for the analysis of Acid Value above (1) is used for the measurement of Peroxide Value. 1~5 g of fat is weighed to be tested according to 1.1.5.3.5 Peroxide Value, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

29-6 Fried Foods

1) Definition

Fried foods refer to oil-fried or oil-treated food that is not specified otherwise in this Food Code.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Acid value : Not more than 5.0

(2) Peroxide value : Not more than 60.0

(3) Unpermitted tar color : Shall not be detected

6) Test Methods

(1) Acid Value

It shall be tested according to (2) Acid Value, 6) Test Methods in 1. Confectioneries.

(2) Peroxide Value

The same fat prepared for the analysis of Acid Value above (1) is used for the measurement of Peroxide Value. 1~5 g of fat is weighed to be tested according to 1.1.5.3.5 Peroxide Value, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Unpermitted tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

29-7 Honey

1) Definition

Honey refers to honeycomb honey obtained from the natural substances such as nectar and sap collected by honeybees that stored and extracted pure honey without any addition of other foods or additives such as pollen, royal jelly, sugars, sweeteners, etc.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Honeycomb honey

Sealed whole or partial honeycomb in which the natural substances such as nectar and sap collected by honeybees are stored. It shall maintain the unique form of the honeycomb.

(2) Honey

Ripened honey extraction from the honeycomb in which the natural substances such as nectar and sap collected by honeybees are stored.

5) Specifications

Type / Category	Honeycomb honey	Honey
(1) Moisture (%)	Not more than 23.0	Not more than 20.0
(2) Water insoluble solid (%)	-	Not more than 0.5
(3) Acidity (meq/kg)	-	Not more than 40.0
(4) Invert sugar (%)	Not less than 50.0	Not less than 60.0
(5) Sucrose (%)	Not more than 15.0	Not more than 7.0
(6) Hydroxymethylfurfural (mg/kg)	Not more than 80.0	Not more than 80.0
(7) Tar color	-	Shall not be detected
(8) Artificial sweeteners	-	Shall not be detected
(9) Isomerized glucose syrup		Shall be negative

6) Test Methods

(1) Test sample

① Honeycomb honey : Place 10 mesh sieve in a glass funnel and add 100 g of honeycomb honey in it. Leave it for 2 hours at 40˚C and take the sieved liquid and mix well to use it as the test sample.

② Honey : If honey does not contain any crystal, stir well. If honey contains crystals, put it in a airtight container and heat it in the water bath at 60~65˚C for 30 minutes to completely dissolved the crystals. Quickly cool it down and stir well to used it as the test sample (However, for Hydroxymethylfurfural test method, sample should not be subjected to heat-treatment).

(2) Moisture

Measure the refraction index of a sample around 20˚C and calculate the water amount according to the following water conversion table.

Temperature compensation : above 20˚C …… .add 0.00023 per 1˚C.

: below 20˚C ……subtract 0.00023 per 1˚C.

Moisture Conversion Table

RI (20˚C)	Moisture (%)	RI(0˚C)	Moisture (%)	RI(0˚C)	Moisture (%)
1.5044	13.0	1.4935	17.2	1.4830	21.4
1.5038	13.2	1.4930	17.4	1.4825	21.6
1.5033	13.4	1.4925	17.6	1.4820	21.8
1.5028	13.6	1.4920	17.8	1.4815	22.0
1.5023	13.8	1.4915	18.0	1.4810	22.2
1.5018	14.0	1.4910	18.2	1.4805	22.4
1.5012	14.2	1.4905	18.4	1.4800	22.6
1.5007	14.4	1.4900	18.6	1.4795	22.8
1.5002	14.6	1.4895	18.8	1.4790	23.0
1.4997	14.8	1.4890	19.0	1.4785	23.2
1.4992	15.0	1.4885	19.2	1.4780	23.4
1.4987	15.2	1.4880	19.4	1.4775	23.6
1.4982	15.4	1.4875	19.6	1.4770	23.8
1.4976	15.6	1.4870	19.8	1.4765	24.0
1.4971	15.8	1.4865	20.0	1.4760	24.2
1.4966	16.0	1.4860	20.2	1.4755	24.4
1.4961	16.2	1.4855	20.4	1.4750	24.6
1.4956	16.4	1.4850	20.6	1.4745	24.8
1.4951	16.6	1.4845	20.8	1.4740	25.0
1.4946	16.8	1.4840	21.0		

1.4940	17.0	1.4835	21.2		

(3) Water insoluble solids

Take 3 g of sample accurately, dissolve it in 200 mL of water (80˚C), filter it with a glass filter (15~40 μm) previously dried at 135˚C to constant mass, and wash the filter with water (80˚C) until any sugar is not detected. Transfer the washed water into a test tube and add phloroglucinol solution. Drip a small amount of concentrated sulfuric acid to the wall side of the test tube. If the contact surface becomes discolored, wash it completely until no discoloration occurs. Then, dry the glass filter completely washed at 135˚C for 1 hour and cool it down in a desiccator before weighing. The amount of water insoluble solids is calculated according to the following formula.

$$\text{Water insoluble solids (\%)} = \frac{W_2 - W_1}{W_0} \times 100$$

W_0 = Sample weight (g)

W_1 = Weight of glass filter dried to constant mass (g)

W_2 = Weight of dried glass filter and water insoluble solids after filtration (g)

[Test solution]

Phloroglucinol solution : Dissolve 1 g of phloroglucinol in 100 mL of ethanol.

(4) Acidity

Weigh a 10.0 g sample accurately, melt it with 75 mL water and titrate it with 0.1 N sodium hydroxide as taking phenolphthalein for the indicator until it turns light red and maintains for 10 seconds.

$$\text{Acidity (meq/kg)} = \frac{a \times f \times 100}{S}$$

a : Amount of the 0.1 N sodium hydroxide solution consumed for titration (mL)

f : Factor of 0.1 N sodium hydroxide solution

s : Sample weight (g)

(5) Invert sugar and sucrose

Ⓐ Lane-Eynone Method

ⓐ Invert sugar

Weigh a 26 g sample accurately, melt it in water, transfer it to a 250 mL volumetric flask, add 5 mL alumina cream reagent, fill water up to the indication line and filter it. After then, take the 10 mL remaining solution and dilute it to 250 mL to prepare a test solution. Take Fehling reagent A and B, each 5 mL and 10 mL water to two 200 mL Erlenmeyer flasks, respectively. Then, add 15 mL sample to it and boil it on asbestos centered iron gauze within two minutes, reduce the thermal power slightly and add 4 drops of 1% methylene blue reagent if the color of copper sulfate fades away and increase it while boiling the solution for a while until the blue color of methylene blue reagent disappears.

Add it by each drop around the end point of titration and be cautious of excessive insertion. The titration should be ended within 3 minutes after it starts boiling. In order to know the estimated titration amount, execute the preliminary test and meet the amount of test solution to 1 ~ 2 mL that is added at the end of the titration.

According to the table of Lane-Eynone invert sugar amount, obtain the amount (A) of invert sugar contained in a 100 mL sample from the total titration amount and calculate the content according to the following formula.

$$\text{Invert sugar (\%)} = A \times f \times \frac{250}{100} \times \frac{250}{10} \times \frac{100}{S} \times \frac{1}{1{,}000}$$

F : factor of Fehling reagent A

S : sample (g)

ⓑ Sucrose

Weigh a 26 g sample accurately, melt it with a small quantity of water, move it to a 100 mL volumetric flask and add 5 mL alumina cream reagent to it. Fill water to the indication line and filter it. Add 25 mL water and 10 mL 20% hydrochloric acid to the 50 mL, transform it to invert sugar at 67˚C, neutralize it with sodium carbonate and add some water, making the total volume of 100 mL. Dilute the 10 mL solution in a volumetric flask to the 250 mL, taking it as the test solution. It is tested according to the above A to get the amount of invert sugar. Invert Sugar to get the amount of invert sugar and finally calculate the amount of Sucrose by subtracting the amount of invert sugar in the above from this amount. From this calculated amount of invert sugar, subtract the amount of invert sugar from above A, and multiply by 0.95 to calculate the amount of sucrose.

Ⓑ Liquid Chromatography

ⓐ Reagent

① Mobile phase : Acetonitrile : Water (75:25)

② Standard sugar solution: Accurately weight 1 g glucose, 1 g fructose and 0.1 g Sucrose and put them in a 100 mL volumetric flask and fill water to the indication line.

ⓑ Devices

① Detector : Refractive Index (Rl)

② Column : Carbohydrate

③ Solvent filter : solvent clarification kit or similar one

ⓒ Preparation of test solution

Weigh 1 g sample accurately and melt it with 25 mL water in a 100 mL volumetric flask, fill acetonitrile to the indication line, filter it with 0.45 μm filter paper and take it as the test solution.

ⓓ Test Operation

(Example of measurement conditions of liquid chromatography)

○ Flow rate : 1.0~1.5 mL/min

○ Injection of test solution : 10~20 μL

○ Attenuation : 8×

As in the above conditions, inject each 10~20 μL test solution and standard sugar solution, to Liquid Chromatography and calculate the amount of invert sugar (glucose + fructose) and sucrose in a sample according to the height or area of peak.

$$\text{Sugar (\%)} = \frac{pH}{pH'} \times \frac{V}{V^1} \times \frac{W^1}{W} \times 100$$

pH, pH': Height or area of a test solution and standard solution

V, V^1: Total amounts of test solution and standard solution (mL)

W, W^1: Collected amounts of a sample an standard sugar (g)

(6) Hydroxymethylfurfural

Ⓐ Spectrophotometry

ⓐ Preparation of a test solution

Weigh a 5 g sample accurately, melt it with 25 mL water and move it to a 50 mL volumetric flask. Put 0.5 mL of 15% potassium ferrocyanide to it, add 0.5 mL 30% zinc acetate solution to it, mix them well, fill some water up to the indication line(add a drop of alcohol once it foams), filter it, throw out the first 10 mL and take the remaining solution as the test solution.

ⓑ Test Operation

Put each 5 mL test solution into two test tubes, add 5 mL water and 5 mL of 0.2% sodium hydrogen sulfite solution for a blank test tube, respectively, and mix them well. Take water for test solution and 0.1% sodium hydrogen sulfite for blank test solution as the control solution and measure the each absorbance at 284 nm and 336 nm.

ⓒ Calculation

$$\text{Hydroxymethylfurfural (mg/kg)} = \frac{(A_{284} - A_{336}) \times 149.7 \times 5}{S}$$

A_{284} and A_{336}: Absorbance of each wavelength (substract blank test sol. from test sol.)

S: Sample weight (g)

Ⓑ Quantitative test by liquid chromatography

ⓐ Preparation of standard solution

Prepare HMF (hydroxymethylfurfural) 1 mg/100 mL (10 ppm) solution and dilute it into 10, 5, 2.5, 1 and 0.5 ppm solutions (corresponding to 10 times the amount of the content in honey).

ⓑ Preparation of test solution

Weigh the 5 g honey accurately, melt it with 50 mL water in a volumetric flask, filter it with 0.45 μm filter paper and take it as the test solution.

ⓒ Test operation

○ Detector : UV detector

○ Column : C_{18} column or the similar one

○ Insertion : 20 μL

○ Mobile phase : Water: Methanol = 90 : 10

○ Flow rate : 1.0~1.5 mL/min

○ Wavelength : 280 nm

ⓓ Calculation

$$\text{HMF(mg/kg)} = \text{Concentration of standard solution} \times \frac{\text{Area of test solution}}{\text{Area of standard solution}} \times \frac{\text{Volume of test solution}}{\text{Weight of a sample}}$$

(7) Tar color

It shall be tested according to 2.4 Coloring Agent in Article 9. General Testing Methods.

(8) Artificial sweetener

It shall be tested according to 2.2.1 Sodium Saccharin in Article 9. General Testing Method.

(9) Isomerized sugar

Ⓐ Apparatus

Insert 2 g celite (No. 545) to the column of which outer dia. is 22 mm and length is 370 mm and put 12 g absorbent (activated carbon Darco-G 60 : Celite No. 545 = 1:1) on it, disperse it with 150 mL water. Sediment the absorbent by using an absorption device, put 2 g celite on it, flow 250 mL water to wash it and flow it out until a little of water remains on the supernatant.

Ⓑ Preparation of test solution

Melt 1 g sample into 10 mL water, put it in a column by using an absorption device, wash it out with 300 mL 7% ethanol then with 100 mL of 25% ethanol. Then, let it flow out with 100 mL of 50% ethanol. Move the discharged solution to a beaker, flow it out with air or nitrogen in an evaporation bath or concentrate it with the similar way. Wash the residues with 1 mL water, move it to a test tube (13 x 100 mm), concentrate it by flowing it out with air or nitrogen while being soaking in a water bath of 60˚C, melt the residues with 0.1~0.2 mL water and take it as the test solution.

Ⓒ Determination (Thin Layer Chromatography)

As the mixed honey of pure honey, Isomerized sugar and test solution on a straight line away from 2 cm of bottom of silica gel G thin layer, take the 2~6 μL solution that is prepared in the similar way and develop it in a developing solvent. Dry it out after the development, spray out

the chromogen, volatilize the solvent, and fix the color by put it in a dryer of 90~95˚C for 15 minutes.

Pure honey shows 1 ~ 2 large spots at 0.35 or more Rf but mixed honey with isomerized sugar or molasses shows a spot from above the starting point. If a sample shows a spot within 0.35 Rf from the starting point, it is determined to be positive.

<Migration solvent>

n-butanol : acetate : water (2 : 1 : 1)

<Chromogen>

Aniline (dissolve 1 mL of redistilled solution with zinc dust before use and 1g of dipheylamine hydrochloride with 50mL acetone and add 5 mL of phosphoric acid (85%). Keep it at 0˚C or prepare it just before use).

29-8 Imitation cheese

1) Definition

Imitation cheese refers to a kind of food manufactured by adding foods and food additives to edible oils and vegetable protein or their processed products and emulsifying it.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Coliform group : Shall be negative

(2) Unpermitted tar color : Shall not be detected

6) Test Methods

(1) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in ticle 9. General Testing Methods.

(2) Unpermitted tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

29-9 Vegetable Cream

1) Definition

Vegetable cream refers to a product processed by adding foods or food additives such as sugar to vegetable oils to be used for filling and decorating cake or bread and enhancing the tastes of coffee and foods.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Moisture (%) : Not more than 8.0 (Limited to powdered products)

(2) Coliform group : Shall be negative (Excluding dried products)

6) Test Methods

(1) Moisture

It shall be tested according to 가. Atmospheric Pressure Heat Drying Method, 1.1.1.1 Weight Reduction by Drying Method, 1.1.1 Moisture in Article 9. General Testing Methods. However, drying time shall be at 105˚C for one hour.

(2) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

29-10 Processed Extract Products

1) Definition

Processed extract products refer to those extracted by water from edible animal materials or processed by adding foods or additives to them. Products of which specifications are defined otherwise are excluded.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Appropriate filtration is necessary for extraction process.

(2) In case of liquefied, syrup or paste products, they shall be pasteurized by appropriate methods depending on the characteristics of the products.

4) Food Types

(1) Extract product

Extract product refers to a product obtained by directly extracting single or mixed raw materials or a product produced by simply mixing these extracts.

(2) Processed extract product

Processed extract product refers to a product processed by adding foods or additives to extract products.

5) Specifications

(1) Tar color : Shall not be detected

(2) Bacterial count : Not more than 100 per 1 mL (Limited to products for directly drinking)

(3) Coliform group : Shall be negative (Limited to pasteurized products or products for directly drinking)

(4) *Escherichia coli* : Shall be negative (Excluding pasteurized products or products for directly drinking)

6) Test Methods

(1) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(2) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) Coliform group

It shall be tested according to 3.7 Coliform group, 3. Microbiological Methods in Article 9. General Testing Methods.

(4) *Escherichia coli*

It shall be tested according to 3.8 *Escherichia coli,* 3. Microbiological Methods in Article 9. General Testing Methods.

29-11 Processed Corn Products for Popcorn

1) Definition

Processed corn products for popcorn refers to a product processed by adding edible salt, edible fats and oils, butter or additives to corns. It is to be consumed after puffing the product.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Unpermitted Tar color : Shall not be detected

(2) Total aflatoxin (μg/kg) : Not more than 15.0 (as the sum of B_1, B_2, G_1 and G_2; However, not more than 10.0 μg/kg for B_1)

6) Test Methods

(1) Tar color

It shall be tested according to 2.4 Coloring Agents in Article 9. General Testing Methods.

(2) Aflatoxin

It shall be tested according to 6.1 Mycotoxins in Article 9. General Testing Methods.

29-12 Edible Salts

1) Definition

Edible salts refer to products manufactured by reprocessing or processing the crystals, the main component from sodium chloride obtained from Seawater (including deep sea water), rock-salt or lake-salt, or products manufactured through crystallization with or without the refining step of the seawater.

2) Requirements of Raw Material

(1) Solar sea salt and other salt imported for use in food shall be categorized or authorized as an edible salt by the country of origin and shall be produced in a sanitary manner meeting the definition of each edible salt type.–

(2) Solar sea salt shall not contain any food additives or other substances.

3) Manufacturing and Processing Standards

4) Food Types

(1) Solar sea salt

Solar sea salt refers to crystals of sodium chloride made through natural distillation of sea water at a salt field and products obtained by grinding, washing, dehydrating or drying them.

(2) Reworked salt

Reworked salt refers to a product made by dissolving raw salt (100%) in purified water, sea water, or concentrated sea water, and processing it through filtration, precipitation, recrystallization, dehydration, and adjustment of salt degree.

(3) Burnt · melted salt

Burnt · melted salt refers to a product made by modifying raw salt (100%) through burning, melting, or other methods. However, it excludes those products processed by washing, grinding and compression.

(4) Refined salt

Refined salt refers to a product of concentrated brine which has been obtained by purifying the sea water (including deep ocean water) through an ion exchange membrane or salt product processed by placing water dissolved with raw salt (100%) in a vacuum evaporator.

(5) Other salt

Other salt refers to powdered or crystallized product manufactured by processing rock-salt or lake-salt to be edible. The salt products specified in above salt type (1) ~ (4) are excluded.

(6) Processed salt

Processed salt refers to a product made by adding foods or food additives to solar salt, reworked salt, refined salt, burnt · melted salt or other salt (not less than 50%) and processing it.

5) Specifications

Type / Category	Solar sea salt	Reworked salt	Burnt · melted salt	Refined salt	Other salt	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)	Not less than 88.0	Not less than 35.0
(2) Total chloride (%)	Not less than 40.0	Not less than 54.0	Not less than 50.0	Not less than 58.0 (Not less than 40.0 for deep sea water)	Not less than 54.0	Not less than 20.0
(3) Moisture (%)	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)	Not more than 9.0	Not more than 5.5
(4) Insoluble substances (%)	Not more than 0.15 (Not more than 0.3 for gray salt)	Not more than 0.02	Not more than 3.0	Not more than 0.02	Not more than 0.15	-
(5) Sulfate ion(%)	Not more than 5.0	Not more than 5.0	Not more than 5.0	Not more than 0.4 (Not more than 5.0 for deep sea water)	Not more than 5.0	Not more than 5.0
(6) Sand powder (%)	Not more than 0.2	-	Not more than 0.1	-	-	-
(7) Arsenic (mg/kg)	Not more than 0.5	Not more than 0.5	Not more than 0.5	Not more than 0.5	Not more than 0.5	Not more than 0.5
(8) Lead (mg/kg)	Not more than 2.0	Not more than 2.0	Not more than 2.0	Not more than 2.0	Not more than 2.0	Not more than 2.0

(9) Cadmium (mg/kg)	Not more than 0.5	Not more than 0.5	Not more than 0.5	Not more than 0.5	Not more than 0.5e	Not more than 0.5
(10) Mercury (mg/kg)	Not more than 0.1	Not more than 0.1	Not more than 0.1	Not more than 0.1	Not more than 0.1	Not more than 0.1
(11) Ferrocyanide ion (g/kg)	Not detected	Not more than 0.010	Not more than 0.010	Not more than 0.010	Not more than 0.010	Not more than 0.010

6) Test Methods

(1) Preparing sample

Grind the sample enough so that it can pass through a 0.84 mm sieve of but not able to pass through a 0.177 mm sieve. Then mix it well.

(2) Sodium Chloride

It shall be tested according to 1.2.1.5 Edible salt, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(3) Total chloride

Take a 25 mL sample from insoluble substance, neutralize it[1)], move it into a 250 mL volumetric flask and dilute it up to the marking. Take the 25 mL into a beaker accurately, put 1~2 drops of 10% potassium chromate solution and titrate it with 0.1 N silver nitrate[2)] solution until it sediments in red, and calculate the total chloride according to the following formula.

$$\text{Total chloride (Cl) (\%)} = \frac{\text{Consumption of 0.1 N silver nitrate solution (mL)} \times 35.45 \times f}{\text{Sample weight (g)}}$$

f : Concentration coefficient of 0.1 N silver nitrate solution

1) Neutralize it with nitric acid if a sample is alkaline; if acidic, use ammonia water

2) Preparing 0.1 N silver nitrate solution: melt 17 g silver nitrate into 1,000 mL water as taking potassium chromate solution as the indicator, titrate it with 0.1 N sodium chloride standard solution and determine the concentration coefficient.

(4) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(5) Insoluble substance

Weight a 10 g sample accurately, put it into a beaker, melt it with 200 mL water, filter it with glass filter which is dried to be a constant weight at 100 ~ 110˚C and wash it until chloride ion is no longer present in the solution. The glass filter washed in the above is weighed to calculate the weight of residue after being dried at 100 ~ 110˚C. The remaining solution is moved to a 250 mL volumetric flask and diluted up to the marking; it is used for the reagent solution for total chloride and sulfate ion test.

(6) Sulfate ion

Put a 25 mL sample from insoluble substance into a beaker, add diluted hydrochloric acid (1:1) to make the volume of 50 mL, boil the sample, add 5% barium chloride gradually to it and heat it up in a water bath. After heating it for 2 hours, filter it with filter paper used for quantitative analysis. Wash the residue with hot water until chloride reaction no longer occurs and dry it out with the filter paper. Put it in a melting pot to carbonize it, heat strongly, incinerate, and cool it down and weigh it, and calculate the sulfate ion according to the following formula.

$$\text{Sulfate ion } (SO_4)\ (\%) = \frac{\text{Weight of residues (g)} \times 0.4115}{\text{Sample weight (g)}} \times 1{,}000$$

(7) Sand powder

Take a 2 ~ 5 g sample, melt it in 100 mL water, add 10 mL hydrochloric acid to it and heat it for an hour on a heating plate. Cool it down to ambient temperature, filter it with filter paper (5C) and wash the insoluble substance until chloride ion is no longer detected. Move the filter paper and insoluble substance to a melting pot that becomes a constant weight beforehand(being cooled down after strongly heating at 850˚C), incinerate it at 850˚C, cool it down to ambient temperature and measure the weight of a pot, calculating the content.

(8) Arsenic

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(9) Lead

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(10) Cadmium

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(11) Mercury

It shall be tested according to 7.1.2.4 Mercury, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(12) Ferrocyanide ion

① Reagents

Ⓐ Mobile phase : 150 mM sodium cyanide (NaCN) solution : 40 mN sodium hydroxide solution (1 : 1)

Ⓑ Standard solution: Dissolve specified amount of potassium ferrocyanide, sodium ferrocyanide, or calcium ferrocyanide in 0.01 M sodium hydroxide solution to make the final volume of 100 mL (100 μg/mL as ferrocyanide ion).

② Instrument

Ⓐ Detector : UV, 218 nm

Ⓑ Column : Shodex IC IF-424 or equivalent

Ⓒ Solvent filter : Solvent Clarification Kit or equivalent

③ Preparation of test solution

Take 2~5 g of sample, dissolve it in 0.01 M sodium hydroxide solution to make the final volume of 50 mL, and filter it through 0.45 μm filter. Use it as test solution. Take a specific amount of standard stock solution and dissolve it in 0.01 M sodium hydroxide solution to make 0.1, 1, 5 and 10 μg/mL as ferroxyanide ion. Use them as standard solution)

④ Test operation (Example of measurement conditions of liquid chromatography)

- Flow velocity : 0.8~1.2 mL/min
- Injection volume : 2~10 μL

Inject the test solution and standard solution into HPLC according to the abovementioned conditions. Compare retention times of peaks and prepare the standard curves with peak heights or areas. Then, calculate the content of ferrocyanide ion in test solution.

29-13 Wheat Flours

1) Definition

Wheat flours refer to powder obtained by sieving, grinding, separating, etc. edible wheat or adding foods or food additives to it.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Wheat flour

(2) Nutrition-enriched wheat flour

Nutrition-enriched wheat flour refers to wheat flour made by adding foods or food additives for the purpose of providing nutritive substances.

(3) Other wheat flours

Whole wheat flour, mixed wheat flour, semolina, or others not specified above (1) and (2).

5) Specifications

Types / Category	Wheat flour			Nutrition-enriched wheat flour	Other wheat flours
	Grade 1	Grade 2	Grade 3		
(1)Appearance	Powder with unique color, without off –taste or off-flavor			Powder with unique color, without off-taste or off-flavor	Coarse particles or powder with unique color, without off-taste or off-flavor
(2) Moisture (%)	Not more than 15.5				
(3) Ash content (%)	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
(4) Sand powder (%)	Not more than 0.03				
(5) Lead (mg/kg)	Not more than 0.2				
(6) Cadmium (mg/kg)	Not more than 0.2				

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

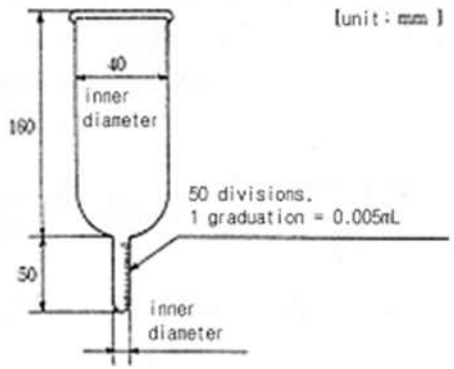
(2) Ash

Weigh a 3~5 g sample accurately and test it according to 1.1.2 Ash, 1. Food Component Methods in Article 9. General Testing Methods (water 14% basis).

(3) Sand powder

Take 25 g of sample according to the carbon tetrachloride (CCl_4) or 1,1,2,2-Tetrachloroethane($CHCl_2CHCl_2$) gravity separation method and mark its weight percentage. A glass bottle (Figure), with inner diameter of 40 mm and length of 160 mm and a fine glass tube with 40 mm in length and 3.5 mm in inner diameter attached at the bottom, which has the total volume of 0.25 mL with 0.005 mL graduations , is used for measurement of sand powder. Put carbon tetrachloride or 1,1,2,2-Tetrachloroethane in the fine glass tube, add the sample and then put 30 mL of carbon tetrachloride or 1,1,2,2-Tetrachloroethane again, mix it well for 2 minutes with a glass rod, and allow it to stand for 30 minutes. Stir it for 1 minute and allow it to stand for 30 minutes. Then, read the value (mL) of precipitated sand powder (1 mL = 1.25 g) and calculated the content according to the following formula.

$$\text{Sand powder (\%)} = \frac{\text{Number of sand powder in mL} \times 1.25}{\text{Sample weight}} \times 100$$



[Figure] Bottle for Measuring Sand Powder

※ Actual bottle for measuring sand powder

- Bottle length : 50 mm
- Inner diameter : 25 mm
- Volume = $3.14 \times 0.125^2 \times 5$ cm

= 0.0049 ml

≒ 0.005 ml

⇩

- Sand powder ⇨ 0.025%

(4) Lead

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

(5) Cadmium

It shall be tested according to 7.1 Methods for Heavy Metals in Article 9. General Testing Method.

29-14 Steamed Rice

1) Definition

Steamed rice refers to a product made by steaming, drying and milling rice or by steaming and drying the milled rice.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

5) Specifications

(1) Total aflatoxin (μg/kg) : Not more than 15.0 (as the sum of B_1, B_2, G_1 and G_2. However, not more than 10.0 μg/kg for B_1)

(2) Sulfur dioxide (g/kg) : Not more 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

It shall be tested according to 6.1 Mycotoxins described in Article 9. General Testing Methods.

(2) Sulfur dioxide

It shall be tested according to 2.5. Sulfurous Acid, Hyposulfurous Acid and Their Salts in Article 9. General Testing Methods.

(3) Lead and cadmium

It shall be tested according to 7.1.2.1 Lead and 7.1.2.2 Cadmium, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

29-15 Uncooked Foods (Saeng-Sik)

1) Definition

Uncooked foods refer to powder, granule, bar, paste, gel, liquid, or other forms of food that is made of animal or plant derived materials, usually processed by drying, to be used as it is or after mixing with water or others. However, if an uncooked food has the applicable standard and specifications, it shall meet the relevant standard and specifications.

2) Requirements of Raw Material

(1) Raw materials shall be free of foreign materials and shall be in a good quality without deterioration.

(2) Any food or food additive to be used shall be stored in a manner appropriate to prevent deterioration or contamination.

3) Manufacturing and Processing Standards

(1) Raw Materials for uncooked food shall be dried through freeze-drying, natural drying, or ventilated drying at no more than 60˚C to minimize the destruction of nutrients, inactivation of enzymes, or gelatinization of starch.

(2) Grinding process shall be performed to prevent the introduction of foreign materials, such as iron fillings, and minimize the destruction of nutritive substances due to frictional heat.

4) Food Types

(1) Uncooked food

Uncooked food refers to a product made by drying animal or plant derived raw materials in a manner to minimize the destruction of nutritive substances, inactivation of enzymes, or gelatinization of starch and to contain not less than 80% of such dried raw materials.

(2) Food containing uncooked materials

Food containing uncooked materials refers to a product made by drying animal or plant derived raw materials in a manner to minimize the destruction of nutritive substances, inactivation of enzymes, or gelatinization of starch and to contain not less than 50% of such dried raw materials.

5) Specifications

(1) Moisture (%) : Not more than 8.0 (Excluding paste, liquid, gel products)

(2) *Clostridium Perfurigence* : Not more than 100 per1 g

(3) *Bacillus Cereus* : Not more than 1,000 per 1 g

(4) *Escherichia coli* : Shall be negative

6) Test methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) *Clostridium perfringence*

It shall be tested according to 3.14.2 Quantitative Tests, 3.14 *Clostridium perfringence,* 3. Microbiological Methods in Article 9. General Testing Methods.

(3) *Bacillus cereus*

It shall be tested according to 3.18.2 Quantitative Tests, 3.18 *Bacillus cereus,* 3. Microbiological Methods in Article 9. General Testing Methods.

(4) *Escherichia coli*

It shall be tested according to 3.8 *Escherichia coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

29-16 Cereals

1) Definition

Cereal refers to a product made by processing grains, such as corn, wheat, or rice and adding vitamins and minerals. If necessary, vegetables, fruits, and nuts may be added. However, if a cereal product has the applicable standard and specifications, it shall meet the relevant standard and specifications.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) Cereals shall be manufactured to assure that vitamin A, B_1, B_2, B_6, C, niacin, folic acid, and vitamin E per one serving shall be included not less than 25% of the recommended daily allowances and iron and zinc per one serving shall be included not more than 10% of the recommended daily allowances. However, if a product is intended for a specific age group, the nutritive substances contained in the product shall be based on the Korean Dietary Reference Intakes.

4) Food Types

5) Specifications

(1) Vitamins : Not less than the labeled amount

(2) Minerals : Not less than the labeled amount

(3) Coliform group : Shall be negative

6) Test Methods

(1) Vitamins

It shall be tested according to 1.2.2 Vitamins, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(2) Minerals

It shall be tested according to 1.2.1 Minerals, 1.2 Micronutrient Component Methods in Article 9. General Testing Methods.

(3) *Escherichia coli*

It shall be tested according to 3.7 *Escherichia coli,* 3. Microbiological Methods in Article 9. General Testing Methods.

29-17 Ices

1) Definition

Ices refer to frozen water to eat directly or to use for manufacturing, processing, cooking or storing food.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Edible ice

Edible ice refers to frozen water to consume directly or to use for manufacturing, processing, cooking or storing food

(2) Ice for fishery

Ice for fishery refers to ice used to store or preserve fishery products.

5) Specifications

Type / Category	Edible ice	Ice for fishery
(1) Chlorine Ion(mg/L)	Not more than 250	-
(2) Nitrate Nitrogen (mg/L)	Not more than 10.0	-
(3) Ammonia Nitrogen (mg/L)	Not more than 0.5	-
(4) Consumption of Potassium Permanganate (mg/L)	Not more than 10.0	-
(5) pH	5.8~8.5	5.8~8.5
(6) Nonvolatile residues (mg/L)	-	Not more than 1,500
(7) Bacterial count	Not more than 100 per 1 mL	Not more than 100 per 1 mL
(8) Coliform group	Shall be negative in 50 mL	Shall be negative in 50 mL

6) Test Methods

(1) Collection and Preparation of a sample

Cut ice in 12 ~ 14 cm thick from its opaque part, divide it equally into four and take one as the sample. Put the sample in a dissolver that is washed with clean water, leave it alone and throw away the first melted water, which is one-fifth of the sample volumetrically. Then, put the remaining into a new dissolver, leave it alone again, melt it completely, shake it and wait for a

while and then take it as the sample. In case of less than 5 kg of packaged ice, melt the required amount and then use it directly as the sample.

(2) Chlorine Ion

Put a 200 mL sample into a beaker, evaporate one-fifth of the total volume, concentrate it and cool it down. After then, add 3 drops of potassium chromate reagent to it and titrate it with 0.01 N silver nitrate solution until it turns reddish brown. The end point is determined by comparing it with the color of a solution prepared by adding 3 drops of potassium chromate reagent to 40 mL water.

From the mL (a) of silver nitrate used for the above titration, calculate the amount of chlorine ion according to the following formula.

$$\text{Chloride ion (mg/L)} = 0.3545 \times a \times \frac{1{,}000}{200}$$

(3) Nitrate Nitrogen

① Reagents

Ⓐ Sodium salicylate

Melt 1 g sodium salicylate in sodium hydroxide (0.01 N) to prepare a100 mL solution.

Ⓑ Sodium Chloride

Melt 0.2 g sodium chloride in distilled water, to prepare a100 mL solution.

Ⓒ Ammonium sulfamate

Melt 0.1 g ammonium sulfamate in distilled water, to prepare a 100 mL solution.

Ⓓ Sodium hydroxide (2→5)

Melt 40 g Sodium hydroxide in distilled water, to prepare a 100 mL solution.

Ⓔ Nitrate nitrogen standard solution

Dry it out at 105 ~ 110˚C for four hours beforehand and melt 0.722 g of potassium nitrate, which has been cooled in a desiccators, in distilled water, preparing the 1 L mixture, add 2 drops of chloroform and preserve it in a brown bottle (the 1 mL of the prepared solution contains 0.1 mg nitrate nitrogen).

Ⓕ Nitrate nitrogen standard solution

Dilute nitrate nitrogen standard solution with distilled water (dilute100×), which should be prepared just before using (the 1 mL of the prepared solution contains 0.001 mg nitrate nitrogen).

② Test

Ⓐ Analysis

Put an appropriate amount of sample (it should contain 0.001 ~ 0.2 mg of nitrate nitrogen) into a 100 mL beaker, add 1 mL of sodium salicylate, 1 mL of sodium chloride and 1 mL of ammonium sulfamate to it and dry it out in a water bath.

Then, cool it down, put 2 mL sulfuric acid, leave it for 10 minutes while stirring it occasionally (If there is a large amount of nonvolatile residues, heat it for 10 minutes in a water bath and cool it down), add 10 mL distilled water to it and transfer it to a Nestler tube. Cool it down again and slowly add 10 mL sodium hydroxide reagent (2→5) and distilled water to prepare a 25 mL solution.

Put a portion of the solution into absorption cell (10 mm), measure the absorbance around 410 nm wavelength with a photoelectric spectrophotometer or photoelectric photometer according to the examination method as taking the blank test solution as the control solution, calculate the amount of nitrate nitrogen in the test solution from the standard curve prepared according to B below and determine the concentration of nitrate nitrogen.

Ⓑ Preparing a calibration curve

0 ~ 20 mL standard solution of nitrate nitrogen is added serially into a beaker and tested according to the above A and determine the correlation between the amount of nitrate nitrogen and absorbance.

(4) Ammonia-nitrogen

① Reagents

Ⓐ Phenol-sodium nitroprusside solution

Melt 5 g phenol and 25 mg sodium nitroprusside into water, preparing the 500 mL mixture. Store it in a cool and dark place and should be used it within a month.

Ⓑ Sodium hypochlorite solution

Melt sodium hypochlorite solution (100/c) mL(c indicates % of effective chlorine concentration) and 15 g sodium hydroxide in water, preparing the 1L mixture; it should be prepared just before use.

Ⓒ Ammonia nitrogen standard solution

Melt 0.3819 g ammonia nitrogen in distilled water, preparing the 1 L mixture (the 1 mL contains 0.1 mg of ammonia nitrogen).

Ⓓ Ammonia nitrogen standard solution

Dilute ammonia nitrogen standard solution with distilled water (dilute100×, which should be prepared just before use (the 1 mL solution contains 0.001 mg ammonia nitrogen).

② Test

Ⓐ Analysis

Put a 10 mL sample (containing less than 0.01 mL ammonia nitrogen or being preparing by adding distilled water to contain the same amount/content of ammonia nitrogen) into a test tube with stopper, add 5 mL phenol-sodium nitroprusside solution to it, plug it with the stopper and mix them by shaking the test tube quietly. Then, put 5 mL sodium hypochlorite solution to it, plug it again, mix them by shaking quietly and leave the mixture at 25 ~ 30˚C for 60 minutes.

Put a portion of the solution into absorption cell (10 mm), measure the absorbance around 640 nm wavelength with a photoelectric spectrophotometer or photoelectric photometer according to the examination method as taking the blank test solution as the control solution, calculate the amount of ammonia nitrogen in the test solution from the calibration curve prepared according to B. and determine the concentration of ammonia nitrogen.

Ⓑ Preparing a calibration curve

0 ~ 10 mL standard solution of ammonia nitrogen is added serially into a test tube with a stopper and add distilled water to prepare a 10 mL mixture. Test it according to the above A and determine the correlation between the amount of ammonia nitrogen and absorbance.

(5) Consumption of potassium permanganate

① Reagent

Ⓐ Diluted sulfuric acid (1 + 2)

Put 100 mL sulfuric acid gradually into 200 mL distilled water while stirring it, increase the temperature in a water bath and add potassium permanganate reagent by each drop until the light red color of potassium permanganate does not disappear.

Ⓑ Sodium hydroxide solution (0.01 N)

Dry it at 150 ~ 200˚C for 1 ~ 1.5 hours, melt 0.670 g of sodium hydroxide, which has been cooled in a desiccators, in distilled water, preparing a 1L mixture, store it in a brown bottle; it should be used within a month.

Ⓒ Potassium permanganate solution (0.01 N)

Melt 0.31 g potassium permanganate with distilled water, preparing a 1L solution and store it in a brown bottle.

Standardization: as the first step, put 100 mL distilled water into an Erlenmyer flask with several boiling stone, add 5 mL diluted sulfuric acid (1+2) and 5 mL potassium permanganate solution (0.01 N) to it, boil it for 5 minutes, then add 10 mL of sodium hydroxide solution (0.01N0 and check the discoloration and titrate it with potassium permanganate solution (0.01 N) until the light red does not disappear. Then, in the 2nd step, add 5 mL diluted sulfuric acid (1+2) and 5.0 mL potassium permanganate solution (0.01 N) to the titrated solution, boil the mixture for 5 minutes, titrate it with potassium permanganate solution(0.01 N) until the light red does not disappear. After then, from the mL(a) of potassium permanganate consumed in the 2nd step, calculate f(factor) according to the following equation.

$$f = \frac{10}{a+5}$$

Ⓓ Boiling stone

Use a boiling stone that does not consume potassium permanganate.

② Test

Put a 100 mL sample into an Erlenmyer flask with several boiling stone, add 5 mL diluted sulfuric acid (1+2) and 5 mL potassium permanganate solution (0.01 N) to it, boil it for 5

minutes, then add 10 mL of sodium hydroxide solution (0.01N0 and check the discoloration and titrate it with potassium permanganate solution (0.01 N) until the light red does not disappear.

From the mL (a) of potassium permanganate consumed, calculate the consumption of potassium permanganate (mg/L) according to the following e equation.

$$\text{Consumption of potassium permanganate (mg/L)} = (a - b) \times f \times \frac{1{,}000}{100} \times 0.316$$

b : consumption of potassium permanganate (0.01N) as the same examination method using distilled water (mL)

f : factor of potassium permanganate (0.01 N) calculated Ⓒ in ①.

(6) pH

Measure it by Glass Electrode Method (pH measuring instrument).

(7) Non-volatile Residues

Take an appropriate amount of the solution prepared in the above, evaporate and dry it out in a water bath, cool it down after drying it at 105˚C, weigh it and calculate the difference between weights (a mg). Then, calculate the nonvolatile residues (ppm) according to the following equation.

$$\text{Non} - \text{volatile residues (mg/L)} = a \times \frac{1{,}000}{\text{Test solution ml}}$$

(8) Bacterial count

Wash the sample obtained in the above (1) with sterilized distilled water, put it into a sterilized container and mix it in warm water lower than 40˚C to completely dissolve the sample and prepare the crude solution, ×10, ×100 and ×1,000 diluted solutions and test them according to 3.5.1 General Bacterial Count, 3 Microbiological Methods in Article 9. General Testing Methods.

(9) Coliform group

Inoculate each 10 mL of the above crude solution to 5 lactose broths and test it according to 가. Lactose Broth Method, 3.7.1 Quantitative Tests, 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

29-18 Ready-To-Eat Foods

1) Definition

Ready-to-eat foods refer to ready-to-eat food, ready-to-cook food, or fresh ready-to-eat food manufactured, processed, and packed to allow consumers to eat it as it is or after simple cooking (However, if a product has the applicable standard and specifications, it shall meet the relevant standard and specifications).

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Ready-to-eat food

Ready-to-eat food refers to gimbap (rice rolled in dried laver), hamburger, seonsik (dried plant materials), and others manufactured and processed by adding foods or food additives to animal or plant derived raw materials to allow consumers to eat it without further cooking process.

(2) Ready-to-cook food

Ready-to-cook food refers to Korean-style soup, broth, soup, and others manufactured and processed by adding foods or food additives to animal or plant derived raw materials to allow consumers to eat it after simple cooking process.

(3) Fresh ready-to-eat food

Fresh ready-to-eat food refers to salad, sprouts, and others made by processing agricultural or forest products through washing, removal of skin, cutting, or fine cutting, or adding foods or food additives to allow consumers to eat it without further cooking process.

5) Specifications

(1) *Escherichia coli* : Not more than 10 per 1 g (Limited to fresh ready-to-eat food; Shall be negative for ready-to-eat food)

(2) Bacterial count : Not more than 100,000 per 1 g (Limited to ready-to-cook food; Excluding fermented product, products containing fermented products or lactic acid bacteria)

(3) *Staphylococcus aureus* : Not more than 100 per 1 g

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

(5) *Vibrio paraphaemolyticus* : Not more than 100 per 1 g (Limited to products containing seafood among ready-to-eat food and fresh ready-to-eat food)

(6) *Bacillus Cereus* : Not more than 1,000 per 1 g (Limited to ready-to-eat food and fresh ready-to-eat food)

(7) *Escherichia coli* O157:H7 : n=5, c=0, m=0/25 g (Limited to fresh ready-to-eat food)

(8) *Clostridium perfringens* : Not more than 100 per 1 g (Limited to ready-to-eat food and fresh ready-to-eat food)

6) Test Methods

(1) *Escherichia coli.*

It shall be tested according to 3.8 *Escherichia coli.* 3. Microbiological Methods in Article 9. General Testing Methods.

(2) Bacterial count

It shall be tested according to 3.5.1 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

(3) *Staphylococcus aureus*

It shall be tested according to 3.12.2 Quantitative Tests, 3.12 *Staphylococcus aureus.* 3. Microbiological Methods in Article 9. General Testing Methods.

(3) *Salmonella* ssp.

It shall be tested according to 3.11 *Salmonella* ssp.3. Microbiological Methods in Article 9. General Testing Methods.

(4) *Vibrio paraphaemolyticus*

It shall be tested according to 3.13 *Vibrio paraphaemolyticus.* 3. Microbiological Methods in Article 9. General Testing Methods.

(5) *Bacillus cereus*

It shall be tested according to 3.18 *Bacillus cereus.* 3. Microbiological Methods in Article 9. General Testing Methods.

(6) *Escherichia coli* O157:H7

It is tested according to 3.16. *Escherichia coli* O157:H7. 3. Microbiological method described in Article 9. General Testing Methods.

(7) *Clostridium perfringens*

It is tested according to 3.14. *Clostridium perfringens*. 3. Microbiological method described in Article 9. General Testing Methods.

29-19 Processed Mushroom Products

1) Definition

Mushroom products refer to powdery products of fruiting bodies of *Ganoderma lucidum*, *Coriolus versicolor* or *Lentinus edodes* or the extract of these fruiting bodies or their mycelium culture fluid processed to be edible.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

(1) If fruiting bodies are to be eaten directly, they should be in a form of very fine powder to easily release the active ingredient within the digestive tract.

(2) Alcohol used in the extraction shall be sufficiently removed during the concentration process.

(3) The residual amount of medium components used in culture shall be not more than 10% of the dried culture fluid.

4) Food Types

(1) Mushroom fruiting body products

Mushroom fruiting body products refer to powdery products of fruiting bodies of *Ganoderma lucidum*, *Coriolus versicolor* or *Lentinus edodes*, or the processed product of fruiting body extract containing not less than 30% of the fruiting body (in case of the fruiting body extract, covert it to the dried material of fruiting body)

(2) Mushroom mycelium products

Mushroom mycelium products refer to products produced by processing the extract from the mycelium culture of Ganoderma lucidum, Coriolus versicolor or Lentinus edodes containing not less than 50% of mycelium (in case of the extract of mycelium culture, convert it to the dried material of the mycelium culture).

5) Specifications

Type / Category	Mushroom fruiting body products	Mushroom mycelium products
(1) Moisture (%)	Not more than 7.0 (except liquid products)	
(2) Fruiting body (%)	Not less than 30.0 (in case of the extract, convert it to the dried material of fruiting body)	-

(3) Mycelium (%)	-	Not less than 50.0 (In case of the extract, convert it to the dried material of mycelium culture)
(4) Tar color	Shall not be detected	
(5) Coliform group	Negative	Negative

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Content of fruiting body or mycelium

① Ganoderma lucidum product

Ⓐ Confirmation and quantification based on acid chloroform soluble solid

ⓐ Preparation of sample and standard material

i. Preparation of sample

Weigh approximately 10 g of the product (in case of the extract, convert it to fruiting body) accurately, transfer it to Erlenmeyer flask, add 100 mL of water, extract it using a cooling tube with a rubber stopper for 4 hours at 90~100˚C through the reflux (for the extract, heat it to dissolve), add 100 mL of ethanol, shake well to mix it, then filter it. The residue is extracted in 200 mL of water:ethanol (1:1) for 30 minutes in water bath. The extract is combined with the filtrate, and the total volume is made to not more than 10 mL through the vacuum concentration. The concentrate is dispensed in 200 mL of water followed by adjusting the pH to pH 3 with 2N hydrochloric acid, and it is extracted with 50 mL of chloroform 3 times. All chloroform layers are combined and transferred to flask, which is weighed beforehand, and chloroform is removed under reduced pressure. The residue is dried in the desiccators (silica gel) for 24 hours, weighed, and used as a prepared sample.

ii. Preparation of standard material

Weigh approximately 10 g of the target products obtained from the dried material of fruiting body through grinding or fine-cutting or the dried culture fluid, transfer it to

Erlenmeyer flask, add 100 mL of water, extract it using a cooling tube with a rubber stopper for 4 hours at 90~100˚C through the reflux (for the extract, heat it to dissolve), add 100 mL of ethanol, shake well to mix it, then filter it. The residue is extracted in 200 mL of water:ethanol (1:1) for 30 minutes in water bath. The extract is combined with the filtrate, and the total volume is made to not more than 10 mL through the vacuum concentration. The concentrate is dispensed in 200 mL of water followed by adjusting the pH to pH 3 with 2N hydrochloric acid, and it is extracted with 50 mL of chloroform 3 times. All chloroform layers are combined and extracted with 50 mL of 5% sodium bicarbonate solution 3 times. All water layers are combined, adjust the pH to pH 3 with 2N hydrochloric acid, and extract it with 50 mL of chloroform 3 times. All chloroform layers are combined and transferred to flask, which is weighed beforehand, and chloroform is removed under reduced pressure. The residue is dried in the desiccators (silica gel) for 24 hours and weighed.

ⓑ Confirmation test

Accurately weigh 3~10 mg of sample obtained from the acid chloroform extraction of the product, add exactly 1 ml of the internal standard solution, and use it as a sample solution. Accurately weigh 3~10 mg of standard material obtained from the acid chloroform extraction of the dried material of Ganoderma lucidum, add exactly 1 mL of the internal standard solution, and use it as a standard solution.

Each 10 μL of sample and standard solution is analyzed using a high speed liquid chromatography under the following condition, and the same specific pattern between the sample chromatogram and standard chromatogram shall be identified.

i. High speed liquid chromatography condition

① For fruiting body products

- Internal standard solution: ethanol solution of thymol (1 mg/ml)
- Detector: UV spectrophotometer (Measurement wavelength of 254 nm)
- Column: Stainless tube of 4 mm in internal diameter and 25~30 in length filled with 5~10 μm octadecylsilanized silica gel (equivalent of μ-Bondapak C18)
- Column temperature: 40˚C

- Mobile phase: 2% acetic acid·acetonitrile (2:1)
- Flow rate : adjust the retention time of thymol to be approximately 40 minutes.
- Column selection: When 10 μL of standard solution is manipulated under the above condition, acid chloroform soluble solid followed by internal standard material is eluted. The peak material <Ganoderic acid A>, which has approximately 2.7 separation factor of internal standard material, and more than 2.0 separation of internal standard material shall be used.

② For culture fluid products

- Internal control solution: ethanol solution (10 μg/mL) of pyrene
- Detector: UV spectrophotometer (Measurement wavelength of 210 nm)
- Column: Stainless tube of 4 mm in internal diameter and 25~30 in length filled with 5~10 μm octadecylsilanized silica gel (equivalent of μ-Bondapak C18)
- Column temperature: Room temperature
- Mobile phase: the mixture of (Monopotassium phosphate, pH 6.5; Disodium hydrogen phosphate buffer)·ethanol (9:20)
- Flow rate: adjust the retention time of pyrene to be approximately 30 minutes
- Column selection: When 10 μL of standard solution is manipulated under the above condition, acid chloroform soluble solid followed by internal standard material is eluted. The peak material <Ganoderic acid S>, which has approximately 1.7 separation factor of internal standard material, and more than 6.0 separation of internal standard material shall be used

ⓒ Quantitative test

i. For fruiting body or culture fluid product

Calculate it according to the following formula using the weight of the acid chloroform soluble solid obtained from the preparation of sample and standard material

$$\text{Content of Ganoderma lucidum (conversion rate} = \frac{\dfrac{\text{Acid chloroform soluble solid of sample (mg)}}{\text{Sample (g)}}}{\text{Acid chloroform soluble solid of standard material (mg)}} \times 100$$

of the dried material %) = $\frac{\text{Dried content of standard fruiting body or standard culture fluid (g)}}{}$

ii. For product processed by mixing fruiting body and culture fluid

Calculate it according to the following formula using the peak area ratio of the indicator material(Ganoderic acid A for fruiting body and Ganoderic acid S for culture fluid) to the peak area of the internal standard material in liquid chromatography of sample and standard material obtained from the confirm test and QtA, QsA, QtS and QsS.

Content of Ganoderma lucidem (conversion rate of the dried material %) = <Content of fruiting body of Ganoderma lucidum (M)> + <Contnet of culture fluid of Ganoderma lucidum (N)>

$$M = \frac{Q_tA\ (\text{prepared sample})/\text{sample weight (g)}}{Q_sA\ (\text{standard material})/\text{dried content of standard fruiting body (g)}} \times 100$$

$$M = \frac{QtS\ (\text{Prepared sample})/\text{sample weight (g)}}{QsA\ (\text{standard material})/\text{dried content of standard cultural fruid (g)}} \times 100\ (\%)$$

② Coriolus versicolor product

Ⓐ Confirmation and quantification based on acid chloroform soluble solid

ⓐ Preparation of sample and standard material

i. Preparation of sample

Weigh approximately 10 g of the product (in case of the extract, convert it to fruiting body) accurately, transfer it to Erlenmeyer flask, add 100 mL of water, extract it using a cooling tube with a rubber stopper for 4 hours at 90~100˚C through the reflux (for the extract, heat it to dissolve), add 100 mL of ethanol, shake well to mix it, then filter it. The residue is extracted in 200 mL of water:ethanol (1:1) for 30 minutes in water bath. The extract is combined with the filtrate, and the total volume is made to not more than 10 mL through the vacuum concentration. The concentrate is dispensed in 200 mL of water followed by adjusting the pH to pH 3 with 2N hydrochloric acid, and it is extracted with 50 mL of chloroform 3 times. All chloroform layers are combined

and transferred to flask, which is weighed beforehand, and chloroform is removed under reduced pressure. The residue is dried in the desiccators (silica gel) for 24 hours, weighed, and used as a prepared sample.

ii. Preparation standard material

Weigh approximately 10 g of the powdered dried material of fruiting body or the dried culture fluid target from the target product, transfer it to Erlenmeyer flask, add 100 mL of water, extract it using a cooling tube with a rubber stopper for 4 hours at 90~100˚C through the reflux (for the extract, heat it to dissolve), add 100 mL of ethanol, shake well to mix it, then filter it. The residue is extracted in 200 mL of water:ethanol (1:1) for 30 minutes in water bath. The extract is combined with the filtrate, and the total volume is made to not more than 10 mL through the vacuum concentration. The concentrate is dispensed in 200 mL of water followed by adjusting the pH to pH 3 with 2N hydrochloric acid, and it is extracted with 50 mL of chloroform 3 times. All chloroform layers are combined and extracted with 50 mL of 5% sodium bicarbonate solution 3 times. All water layers are combined, adjust the pH to pH 3 with 2N hydrochloric acid, and extract it with 50 mL of chloroform 3 times. All chloroform layers are combined and transferred to flask, which is weighed beforehand, and chloroform is removed under reduced pressure. The residue is dried in the desiccators (silica gel) for 24 hours and weighed.

ⓑ Confirmation test

Accurately weigh 3~10 mg of sample obtained from the acid chloroform extraction of the product, add exactly 1 ml of the internal standard solution, and use it as a sample solution. Accurately weigh 3~10 mg of standard material obtained from the acid chloroform extraction of the dried material of Ganoderma lucidum, add exactly 1 mL of the internal standard solution, and use it as a standard solution.

Each 10 μL of sample and standard solution is analyzed using a high speed liquid chromatography under the following condition, and the same specific pattern between the sample chromatogram and standard chromatogram shall be identified.

i. High speed liquid chromatography condition

— Internal standard solution: ethanol solution of thymol (1 mg/ml)

— Detector: UV spectrophotometer (Measurement wavelength of 254 nm)

— Column: Stainless tube of 4mm in internal diameter and 25~30 in length filled with 5~10 μm octadecylsilanized silica gel (equivalent of μ-Bondapak C18)

— Column temperature: 40˚C

— Mobile phase: 2% acetic acid·acetonitrile (2:1)

— Flow rate: adjust the retention time of thymol to be approximately 40 minutes

ⓒ Quantitative test

Calculate it according to the following formula using the weight of the acid chloroform soluble solid obtained from the preparation of sample and standard material

$$\text{Fruting body or mycelium of Coriolus versicolor (conversion rate of the dried material) (\%)} = \frac{\dfrac{\text{Acid chloroform soluble solid of sample(mg)}}{\text{Sample(g)}}}{\dfrac{\text{Acid chloroform soluble solid of standard material (mg)}}{\text{Dried content of standard fruiting body or standard culture fluid (g)}}} \times 100$$

③ Lentinus edodes product

Ⓐ Apparatus

ⓐ Developing chamber: airtight glass contatiner, which can be used with a glass plate with 200 mm x 200 mm

ⓑ Silica gel thin layer plate: 30 g of silica gel for thin layer chromatography is mixed with 50 mL of water. Using the mixture, coat the plass plate (200 mm × 200 mm) uniformly with the 0.3~0.5 mm thickness. After drying for 3 hours at 105~100˚C, it is cooled and stored in a desicator.

ⓒ UV light lamp (365 nm): desk model or portable model

Ⓑ Reagents

ⓐ Anhydrous ethanol (special grade)

ⓑ 1 N ammonium solution: take 67 mL of ammonium (28%) and add water to make the final volume of 1L

ⓒ 0.5 N acetate solution: take 29 mL of glacial acetic acid (special grade) and add water to make the final volume of 1L

ⓓ Developiong solvent: Mix n-butyl alcohol (special grade), acetic acid (special grade) and add water with the ratio of 4:1:2 (capacitance ratio)

ⓔ Ion-exchange resin: Amberlite IR-120B (H-type) and Amberlite IRA-45 (OH-type)

ⓕ Ninhydrine solution: ninhydrine (special grade) is dissolved in saturated n-butanol with water to make 0.2% solution

Ⓒ Preparation of standard solution

ⓐ Preparation of standard material: Accurately weigh 10 g of dried Lentinus edodes and cultivated Lentinus edodes mycelium and put it in an Erlenmeyer flask, add water (10 times the amount of the materials in flask), carry out an extraction using a cooling tube with a rubber stopper for 4 hours at 90~100˚C through the reflux, then it is made to the final fluid volume of 20 mL by vaccum evaporation.

ⓑ Preparation of standard solution: To standard material, add anhydrous ethanol (4 times the amount of the standard material) to make 80% ethanol solution, and its pricipitate is removed by centrifugation. Ethanol is removed from the supernatant through vaccum evaporation. Then the supernatant is transferred to a seoaratiry funnel, extracted with ether 2 times, and ether layer is removed. After ether is completely removed, add 10 g of Amberlite IR-120B(H-type) to water layer and incubate it in water bath for 30 minutes for absorption. The absorbed reisn is washed with water and 20 mL of 1 N NH4OH is added to it and incubated in a water bath for 30 minutes for elution. After elution, 10 g of Amberlite IRA-45(OH-type) is added to it and incubated in a water

bath for 30 mnutes for absorption. The absorbed resin is washed with water and it is eluted with 20 mL of 0.5 N CH3COOH while shaking. It is repeatedly eluted for 2~3. The eluted solution is subjected to vaccum evaporation to make the final volume of 1 mL. The prepared solution is used as the standard solution.

Ⓓ Preparation of test solution

ⓐ Preparation of sample : For the processed powder of fruiting body of Lentinus edodes or artificially cultivated mycelium or the processed products of them, accurately weigh 10 g of the product, transfer it to Erlenmeyer flasks, add water (10 times the amount of the materials in flask), carry out an extraction using a cooling tube with a rubber stopper for 4 hours at 90~100˚C through the reflux, then the extracts are combined together and made to the final fluid volume of 20 mL by vaccum evaporation. However, if the raw materials are the extracts of fruiting body of Lentinus edodes and artificially cultivated mycelium, 10 g of the product is disoolved or suspended in 20 mL of water.

ⓑ Preparation of test solution : Test solution is prepared by the same method as Ⓑ Preparation of standard solution described in ③ Preparation of standard solution.

Ⓔ Test operation

After 20 μL of each standard solution and test solution is dripped (3~5 mm in diameter) on silica gel thin layer plate (200 mm×200 mm), develop it in the developing chamber. After the developed silica gel thin layer plate is air-dried, spray ninhydrine solution, heat for several minutes at 90~100˚C to induce color formation. Then the part with color formation is exposed to UV light (365 nm) and compared the Elidadenin of the fluorescence. The same Elidadenin from a thin layer plate, which was separately operated, is scrapped and gathered, and a fixed amount of ethanol is added to it for an extraction. After

centrifugation, 1cm of the liquid layer is subjected to the measurement of absorbance at 253.6 nm to calculate the content.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents, 2. Methods for Food Additives in Food in Article 9. General Testing Methods.

(4) Coliform group

It shall be tested according to 3.7 Coliform group, 3. Microbiological Methods in Article 9. General Testing Methods.

29-20 Soft-Shelled Turtle Products

1) Definition

Soft-shelled turtle products refer to products made to be suitable for human consumption by processing a cultured soft-shelled turtle to be edible or products processed to be easily ingested with a cultured soft-shelled turtle to be edible as its main ingredient.

2) Requirements of Raw Material

(1) Soft-shelled turtle should be cultured hygienically, in a good quality and not be deteriorated.

3) Manufacturing and Processing Standards

4) Food Types

(1) Soft-shelled turtle powder

Soft-shelled turtle powder refers to a product made with the whole edible part or partial fat removed from a cultured edible soft-shelled turtle, followed by powdering through freeze-drying or hot-air drying.

(2) Soft-shelled turtle powder products

Soft-shelled turtle powder product refers to a product processed using a freeze-dried soft-shelled turtle powder or hot-air dried soft-shelled turtle powder as a main ingredient (not less than 30.0%).

(3) Soft-shelled turtle oil products

Soft-shelled turtle oil product refers to a product processed by using soft-shelled turtle oil as a main material (not less than 98.0%) (including soft-shelled turtle oil).

5) Specifications

Type / Category	Soft-shelled turtle powder	Soft-shelled turtle powder products	Soft-shelled turtle oil products
(1) Moisture (%)	Not more than 5.0	Not more than 10.0	_
(2) Ash (%) ① Freeze-drying product ② Hot-air drying product	 16.0~40.0 20.0~40.0	 Not less than 4.8 Not less than 6.0	_
(3) Crude protein (%) ① Freeze-drying product ② Hot-air drying product	 48.0~58.0 50.0~70.0	 Not less than 14.0 Not less than 15.0	_

(4) Hydroxyproline (%) ① Freeze-drying product ② Hot-air drying product	 Not less than 1.0 Not less than 2.0	 Not less than 0.3 Not less than 0.6	_
(5) Crude fat (%)	_	_	Not less than 95.0
(6) Acid value	_	_	Not more than 1.0
(7) Peroxide vlaue	_	_	Not more than 15.0
(8) Pamitoleic acid (%)	_	_	8.0~18.0
(9) Arachidonic acid and Eicosapentaenoic acid (%)	_	_	2.0~8.0
(10) Coliform group	Negative	Negative	Negative

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Ash

It shall be tested according to 1.1.2 Ash, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Crude protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude protein, 1.1.3 Nitrogen Compound, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(4) Hydroxyproline

It shall be tested according to 1.1.3.3 Amino Acid, 1.1.3 Nitrogen Compound, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Method.

(5) Crude fat

It shall be tested according to 1.1.5.1 Crude fat, 1.1.5 Lipid, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(6) Acid value

It shall be tested according to 1.1.5.3.1 Acid value, 1.1.5.3 Chemical test method, 1.1.5 Lipid, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(7) Peroxide value

It shall be tested according to 1.1.5.3.5 Peroxide value, 1.1.5.3 Chemical testing method, 1.1.5 Lipid, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(8) Palmitoleic acid

It shall be tested according to 1.1.5.4 Fatty acid, 1.1.5 Lipid, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods. Only, palmitoleic acid is used as the standard.

(9) Arachidonic acid and Eicosapentaenoic acid

It shall be tested according to 1.1.5.4 Fatty Acid, 1.1.5 Lipid, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods. Only, arachidonic acid shall be additionally tested for the standard.

(10) Coliform group

It shall be tested according to 3.7 Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods.

29-21 Yeast Foods

1) Definition

Yeast foods refer to products processed to be easily ingested with edible yeast or using it as the main material.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Dried yeast

Dried yeast refers to a product made by separation, purification and drying of edible yeast strains

(2) Dried yeast products

Dried yeast products refer to products manufactured and processed using dried yeast as a main material (not less than 60.0%)

(3) Yeast extract products

Yeast extract products are processed by using the extract of edible yeast strains, which is extracted through self-digestion, enzyme hydrolysis, hot water extraction, etc. after the separation and purification of edible yeast strains, as a main material (not less than 30.0% as a solid content; not less than 15.0% as a solid content in liquid product)

5) Specifications

Type / Category	Dried yeast	Dried yeast products, Yeast extract products
(1) Moisture (%)	Not more than 8.0	Not more than 10.0 (except liquid products)
(2) Crude protein (%)	Not less than 40.0	Not less than 24.0 (dried yeast products) Not less than 10.0 (yeast extract products, but, not less than 5.0 for liquid products)
(3) *Escherichia Coli.*	Negative	Negative

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Crude protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1.1.3 Nitrogen Compound, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(3) *Escherichia Coli.*

It shall be tested according to 3.8 *Escherichia Coli*. 3. Microbiological Methods in Article 9. General Testing Methods.

29-22 Enzyme Foods

1) Definition

Yeast foods refer to products made by culturing an edible microorganism in plant ingredient to contain a large quantity of enzyme, extracting enzyme-containing part of food or using it as a main ingredient to process a product that is easily be consumed.

2) Requirements of Raw Material

Microorganisms used in the culture shall be verified to be safe.

3) Manufacturing and Processing Standards

4) Food Types

(1) Products containing cereal enzyme

Products containing cereal enzyme refer to products processed by culturing an edible microorganism in cereal (not less than 60.0%), or extracting enzyme-containing parts of food, or using it as a main ingredient (not less than 50.0%).

(2) Products containing rice embryo enzyme

Products containing rice embryo enzyme refer to products processed by culturing an edible microorganism in the embryo of cereal (not less than 40.0%), or extracting enzyme-containing part of food, or using it as a main ingredient (not less than 50.0%).

(3) Products containing fruit and vegetable enzyme

Products containing fruit and vegetable enzyme refer to products processed by culturing an edible microorganism in fruit and vegetable (not less than 60.0%), or extracting enzyme-containing part of food, or using it as a main ingredient (not less than 50.0%).

(4) Products containing other plant enzyme

Products containing other plant enzyme refer to products processed by culturing an edible microorganism in plant ingredient (not less than 60.0%) except cereals, embryo of cereal or fruit and vegetable, or extracting enzyme-containing part of food, or using it as a main ingredient (not less than 50.0%).

5) Specifications

(1) Moisture (%) : Not more than 10.0 (except liquid product)

(2) Crude protein (%) : Not less than 10.0

(3) α-Amylase : Shall be positive

(4) Protease : Shall be positive

(5) *Escherichia coli.* : Shall be negative

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Crude protein

It is tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1.1.3 Nitrogen Compound, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(3) α-Amylase

① Reagents

Ⓐ 1% soluble starch solution: add 1 g of soluble starch (the highest purity level) to water and gelatinize it to make a final volume of 100 mL.

Ⓑ Mcllvaine buffer solution (pH 6.0 or 7.0) : A fixed quantity of 0.1 N diabaisc sodium phosphate solution is tritrated with 0.1 N citric acid solution to make pH 6.0 and pH 7.0 each.

Ⓒ 0.1% calcium chloride solution: add 1 g of calcium chloride (the purity level) to water to make a final volume of 100 mL.

Ⓓ Iodine solution: dissolve 0.2 g of Iodine and 2 g of potassium iodine in water to make a mixture of 100 mL. Take 1 mL of the mixture, add 1 mL of 1 N hydrochloride and fill with water to make a 100 mL solution.

② Apparatus

Spectrophotometer

③ Preparation of test solution

Weigh a 5.0 g of sample accurately, dissolve it with water or butter solution to make a volume of 100 mL, filter it and use it as a sample solution. Prepare the two 20 mL tubes for the test

and blank, respectively. Add 5 mL of 1% soluble starch solution, 13 mL of Mcllvaine buffer solution (pH 6.0 or 7.0), and 1 mL of 0.1% calcium chloride solution into the tube, heat it at 37˚C for 30 minutes. Separately, the blank is prepared by the above procedure using 1 mL of the sample solution, which is inactivated by heating at 100˚C for 30 minutes. Add 100 mL of iodine solution to each 0.2 mL of the test and blank solution and use it as a test solution.

④ Test operation

An absorbency of 1 cm of liquid layer is measured at a wave length of 660 nm and water is used as a control solution. The absorbance of the test solution shall be more than 0.030 greater than that of the blank solution. If the degree of color fixation is too high for measurement, dilute the sample for the test and apply the dilution factor.

(4) Protease

① Reagents

Ⓐ 0.6% casein solution : Dry and weigh 0.6 g of casein (the highest purity level), add to 20 mL of 0.1 N Sodium hydroxide, heat it to dissolve, cool it down, titrate to a pH 7.0 with 0.1 M phosphoric acid, and add 20 mL of a pH 7.0 buffer solution to make the final volume of 100 mL.

Ⓑ 0.4 M Trichloroacetic acid solution : add 65.4 g of trichloroacetic acid (the purity level) to 1 L of water

Ⓒ 0.4 M Sodium carbonate : add 42.5 g of sodium carbonate (the purity level) to 1 L of water

Ⓓ Folin reagent : make an undiluted solution according to the Korean Food Additives Code

Ⓔ Buffer solution : 0.1 M phosphate buffer (pH 6.0 or 8.0) or 0.1 M acetate buffer (pH 6.0 or 8.0)

② Apparatus

Spectrophotometer

③ Preparation of test solution

Weigh 5.0 g of sample accurately, dissolve it with water or buffer solution to make the final solution of 100 mL, filter it, and use it as a sample solution. Add 1 mL of 0.6 % casein

solution into a test tube, heat it in a water bath at 37˚C followed by adding accurately1 mL of sample solution, and mix well by shaking. Soon, incubate it in a water bath at 37˚C for exactly 10 minutes, add 2 mL of 0.4 M tricholoacetic acid solution to it, incubate the mixture in the water bath at 37˚C for 25 minutes, and filter it. Take 1 mL of the filtrate and put it in a test tube, add 5 mL of 0.4 M sodium carbonate and 1 mL of Folin reagent (3 folds dilution from the undiluted solution) into the tube, mix well by shaking, incubate at 37˚C for 25 minutes, and use the colored solution as a test solution. Separately, take exactly1 mL of sample solution put it in a test tube, incubate the tube at 37˚C for 10 minutes, add 2 mL of 0.4 M trichloroacetic acid solution into the tube, mix it, add 1 mL of 0.6% casein solution into the tube, incubate it at 37˚C for 25 minutes, and follow the same procedure as the test solution and use the resulting solution as the blank solution.

④ Test operation

Measure the absorbance at 660 nm with 1cm liquid layer using water as a control solution. The absorbance of test solution shall be more than 0.030 greater than that of the blank solution. If measuring the absorbance is difficult due to excessive color fixation, dilute the sample solution and apply the dilution factor.

(5) *Escherichia coli.*

It shall be tested according to 3.8 *Escherichia coli*. 3. Microbiological Methods in Article 9. General Testing Methods.

29-23 Pollen Processed Products

1) Definition

Pollen processed products refer to products made through pulverization of skin, extraction, concentration, purification, etc. of pollen or by using it as a main ingredient and processing it.

2) Requirements of Raw Material

(1) Pollen shall be collected from honey bee or other methods and shall not be mixed with foreign materials.

3) Manufacturing and Processing Standards

4) Food Types

(1) Processed pollen

Processed pollen refers to a product made by removing the foreign matter and pulverizing the skin from pollen collected by honeybees or by an artificial method.

(2) Pollen extracts

Pollen extracts refer to products produced by concentrating or powdering the pollen extract which has been extracted by mechanical crush or enzyme treatment.

(3) Pollen products

Pollen products refer to products processed using pollen as a main ingredient (not less than 30.0%).

(4) Pollen extract products

Pollen extract products refer to products processed using pollen extract as a main ingredient (not less than 10.0% as solid content).

5) Specifications

Type / Category	Processed pollen	Pollen extracts	Pollen products, Pollen extract products
(1) Moisture (%)	Not more than 8.0	Not more than 8.0 (Except liquid products)	Not more than 10.0 (Except liquid products)
(2) Crude protein (%)	More less 18.0	Not less than 20.0 (Convert to the dried material)	Not less than 5.0 (Pollen products), Not less than 2.0 (Pollen extract products)
(3) Tar color	Shall not be detected	Shall not be detected	Shall not be detected

(4) *Escherichia coli.*	Negative	Negative	Negative

6) Test Methods

(1) Moisture

It shall be tested according to 1.1.1 Moisture, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(2) Crude protein

It is tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1.1.3 Nitrogen Compound, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(3) Tar color

It shall be tested according to 2.4 Coloring Agents, 2. Methods for Food Additives in Food in Article 9. General Testing Methods.

(4) *Escherichia Coli.*

It shall be tested according to 3.8 *Escherichia Coli*. 3. Microbiological Methods in Article 9. General Testing Methods.

29-24 Royal Jelly Processed Products

1) Definition

Royal jelly processed products refer to products that are the secretion secreted from the pharyngeal glands of worker bees which can be directly ingested or processed to easily be consumed.

2) Requirements of Raw Material

3) Manufacturing and Processing Standards

4) Food Types

(1) Fresh royal jelly

Fresh royal jelly refers to a product made by removing foreign materials from royal jelly, the secretion from pharyngeal gland of worker bees, to be suitable for consumption.

(2) Freeze dried royal jelly

Freeze dried royal jelly is a product made by freeze drying the fresh royal jelly.

(3) Royal jelly product

Royal jelly product refers to processed royal jelly (not less than 35.0% of fresh royal jelly, not less than 14.0% of freeze dried royal jelly) except the above (1) and (2).

5) Specifications

Type / Category	Fresh royal jelly	Freeze dried royal jelly	Royal jelly product
(1) 10-Hydroxy-2-decenoic acid	Not less than 1.6	Not less than 4.0	Not less than 0.56
(2) Moisture (%)	65.5~68.5	Not more than 5.0	-
(3) Crude protein (%)	11.0~14.5	30.0~41.0	-
(4) Acidity (1N NaOH mL/100g)	32~53	-	-
(5) *Escherichia coli.*	Negative	Negative	Negative

6) Test Methods

(1) 10-Hydroxy-2-decenoic acid (10-HAD)

① Apparatus

High performance liquid chromatography

② Preparation of standard solution

After drying the standardized 10-HAD in a sulfuric acid desicator, accurately take 50 mg and dissolve it with methanol to make the final volume of 50 mL and use it as a standard solution (1,000 ppm). Dilute the standard solution before use if needed.

③ Preparation of test solution: Take sample(for soft capsules, take the content and film together) equivalent to 48 mg as 10-HDA and put it in a 500 mL flask, add 50 mL of water, warm it and mix it by shaking. For soft capsules, after mixing the film and content homogeneously, add 350 mL of methanol and subjected to extraction by ultrasonic vibration for 30 minutes. Then, add methanol to make the final volume of 500 mL, filter it and use the resulting solution as a test solution.

④ Test operation

Ⓐ Measurement condition of High performance liquid chromatography

ⓐ Column : μ-Bondapak C18 or the equivalent

ⓑ Mobile phase : Mixture of 0.02 M (NH4)2HPO4·Methanol(7:3) (Adjust to pH 7.0 by adding phosphoric acid)

ⓒ Detector : UV 214 nm

ⓓ Flow rate : 1.4 mL/min (Adjust the flow rate appropriately so that the main peak's retention rate of 10-HDA becomes 7~10 minutes)

Ⓑ Quantitative test

Obtaine the graph of 10-HDA by injecting 10 μL of test solution and standard solution into to liquid chromatogram. Compare the obtained graph with the standard graph to check the peak corresponding to 10-HDA. The content of 10-HAD is calculated by following equation using the area and height of the peak.

<Calculation>

10-DHA content (%) =

$$\frac{\text{Peak area of 10-HDA in test solution}}{\text{Peak area of 10-HDA in standard solution}} \times \frac{\text{Weight of stadard material (mg)}}{\text{weight of sample (mg)}} \times 100$$

(2) Moisture

It shall be tested according to 1.1.1 Moisture, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods. Otherwise, fill weighing bottle

half full by adding refined sea sand (of 20~40 mesh), and put a glass rod in it to make it a constant weight. Then, accurately weigh 2~3 g of sample and add it into the weighing bottle, mix it well using the glass rod, put it in a decompression dryer at 70±2˚C and dry it by decompression at 25±5 mmHg for 4 hours.

$$\text{Moisture (\%)} = \frac{B-C}{B-A} \times 100$$

A : Weight of weighing bottle (including sea sand and glass rod) (g)

B : Weight of sample and weighing bottle (g)

C : Weight after drying (g)

(3) Crude protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1.1.3 Nitrogen Compounds, 1.1 General Component Methods, 1. Food Component Methods in Article 9. General Testing Methods.

(4) Acidity

Add 50 mL of water (not containing carbon dioxid) and 0.5 mL of phenolphthalein solution into 0.5 g of sample and titrate it using 0.1 N sodium hydroxide solution until the red color lasts for 30 seconds.

$$\text{Acidity (1N NaOH mL/100g)} = \frac{a \times f \times 10}{\text{Sample weight (g)}}$$

a : Amount of 0.1 N NaOH solution consumed (mL)

f : Titer of 0.1 N NaOH solution

(5) *Escherichia Coli.*

It shall be tested according to 3.8 *Escherichia Coli*. 3. Microbiological Methods in Article 9. General Testing Methods.

Article 6. Specifications for Fishery Products

Article 6. Specifications for Fishery Products

1. Specifications

1) Common Standards and Specifications for General Fishery Products

(1) Appearance : Shall be suitable

(2) Bacterial count

① Frozen fishery products in a packing container, which is sanitarily treated for the purpose of marketing so that consumer can eat directly without further cooking : Not more than 100,000 per 1 g.

(3) Coliform group

① Frozen fishery products in a packing container, which is sanitarily treated for the purpose of marketing so that consumer can eat directly without further cooking : Not more than 10 per 1 g.

(4) For fishery products in a packing container, which is sanitarily treated for the purpose of marketing so that consumer can eat directly without further cooking, it shall be negative for *Salmonella* spp. and *Listeria monocytogens*, and shall not contain more than 100 per 1g of *Vibrio parahaemolyticus* and *Staphylococcus aureus*.

(5) Carbon monoxide

① Fishery products shall not be artificially treated with carbon monoxide

② Determination of the presence of carbon monoxide treatment in fillet, chopped or cut frozen tilapia, frozen tuna and Japanese amberjack (*Seriola quinqueradiata*) (cold storage or frozen) is followed by b), ①, (3), 5), 2. in Article 6.

③ Determination of the presence of carbon monoxide treatment in vacuum packaged frozen tilapia and Japanese amberjack (cold storage or frozen) is followed by b), ②, (3), 5), 2. d in Article 6.

2) Tetrodotoxin

① Flesh : Not more than 10 MU/g

② Skin : Not more than 10 MU/g

③ Types of edible puffer fish

	Types	Scientific name
1	Grass puffer	*Fugu niphobLes, Takifugu niphobLes*
2	Fine patterned puffer	*Fugu poeciLonotus, Takifugu poeciLonotus*
3	Panther puffer	*Fugu pardaLis, Takifugu pardaLis*
4	Vermiculated puffer	*Fugu vermicuLaris vermicuLaris, Takifugu vermicuLaris snyderi*
5	Globe fish	*Fugu vermicuLaris porphyreus, Takifugu porphreus*
6	River puffer	*Fugu ocellatus obscurus, Takifugu obscurus*
7	Red-eyed puffer	*Fugu chrysops, Takifugu chrysops*
8	Tiger puffer	*Fugu rubripes, Takifugu rubripes*
9	Eyespot puffer	*Fugu rubripes chinensis, Takifugu chinensis*
10	Striped puffer	*Fugu xanthopterus, Takifugu xanthopterus*
11	Smooth-backed blowfish	*LagocephaLus inermis*
12	Brown-backed toadfish, pufferfish	*LagocephaLus WheeLeri*
13	Brown-backed toadfish, swell fish	*LagocephaLus gLoveri*
14	Slackskinned puffer	*Sphoeroides pachygaster, Liosaccus pachygaster*
15	Towny puffer	*Fugu fLavidus, Takifugu fLavidus*
16	Pacific burrfish	*ChiLomycterus affinis*
17	Long-spine porcupinefish	*Diodon hoLocanthus*
18	Bleekers porcupinefish	*Diodon Liturosus*
19	Spot-fin porcupinefish	*Diodon hystrix*
20	Bluespotted boxfish	*Ostracion cubicus*
21	Spottyback puffer	*Fugu stictonotus, Takifugu stictonotus*

3) Agar

(1) Appearance : Shall be suitable

(2) Moisture (%) : Not more than 22.0

(3) Crude protein (%) : Not more than 3.0

(4) Crude ash (%) : Not more than 6.0

(5) Residues insoluble in boiling water (%) : Not more than 4.0

(6) Boric acid (%) : Not more than 0.10

4) Frozen Edible Fish Head

(1) Definition

Frozen edible fish head refers to heads cut off from cods (*Gadus morhua, Gadus ogac, Gadus macrocephalus*), southern hake (*Merluccius australis*) and tunas with pectoral fin and ventral fin attached. It also refers to edible parts separated from heads of all edible fish (except blowfish). These products are quickly frozen to make the central part of the product not more than -18˚C and then treated to be suitable for consumption.

(2) Requirements of raw materials

(a) Raw materials should be classified as edible (HS 0303) by the International Convention on the Harmonized Commodity Description and Coding System of World Customs Organization (WCO) and treated sanitarily then verified by the associated organizations.

(b) During the cutting process of the raw materials, viscera, coagulated blood and gill should be removed.

(c) Other materials such as food additives should not be used.

(3) Specifications

① Appearance : Shall be suitable

② Heavy Metals

(a) Total mercury : Not more than 0.5 mg/kg (Except abyssal fish, tunas and billfishes)

(b) Methyl mercury : Not more than 1.0 mg/kg (Limited to abyssal fish, tunas and billfishes)

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

③ *Escherichia coli* : Negative

④ Bacterial count : Not more than 1,000,000 per 1 g

⑤ Radioactivity

(a) ^{131}I : Not more than 300 Bq/kg

(b) $^{134}Cs+^{137}Cs$: Not more than 370 Bq/kg

⑥ Histamine : Not more than 200 mg/kg (Limited to tunas)

(4) Test Methods

① Total mercury

It shall be tested according to 7.1.2.4 Mercury, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

② Methyl mercury

It shall be tested according to 7.1.2.7 Methyl Mercury, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

③ Lead

It shall be tested according to 7.1.2.1 Lead, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

④ *Escherichia coli*

It shall be tested according to 3.8 *Escherichia coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

⑤ Bacterial count

It shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

⑥ Radioactivity

It shall be tested according to 7.2 Radioactivity, 7 Methods for Hazardous Materials in Food in Article 9. General Testing Methods.

⑦ Histamine

It shall be tested according to 11) Histamine, 2. Test Methods in Article 6. Specifications for Fishery Products.

5) Frozen Edible Fish Viscera

(1) Definition

Frozen edible fish viscera refers to fish eggs (except blowfish eggs), intestine of walleye pollock, milt (hard roe), and squid nidamental gland, etc. They are quickly frozen to make the central part of the product not more than -18˚C and treated to be suitable for consumption.

(2) Requirements of raw materials

(a) Raw materials should be classified as edible (HS 0303, 0306 or 0307) by the International Convention on the Harmonized Commodity Description and Coding System of World Customs Organization (WCO) and treated sanitarily then verified by the associated organizations.

(b) During the isolation process of the raw materials, other viscera should be removed.

(c) Other materials such as food additives should not be used.

(3) Specifications

① Appearance : Shall be suitable

② Heavy metals

(a) Total mercury : Not more than 0.5 mg/kg (Except abyssal fish, tunas and billfishes)

(b) Methyl mercury : Not more than 1.0 mg/kg (Limited to abyssal fish, tunas and billfishes)

(c) Lead : Not more than 0.5 mg/kg (However, not more than 2.0 mg/kg for cephalopods)

(d) Cadmium : Not more than 3.0 mg/kg (However, not more than 1.0 mg/kg for fish egg and not more than 2.0 for cephalopods)

③ *Escherichia coli* : Negative

④ Bacterial count : Not more than 1,000,000 per 1 g

(4) Test Method

① Total mercury

It shall be tested according to 7.1.2.4 Mercury, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

② Methyl mercury

It shall be tested according to 7.1.2.7 Methyl Mercury, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

③ Lead

It shall be tested according to 7.1.2.1 Lead, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

④ Cadmium

It shall be tested according to 7.1.2.2 Cadmium, 7.1 Methods for Heavy Metals in Article 9. General Testing Methods.

⑤ *Escherichia coli*

It shall be tested according to 3.8 *Escherichia coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

⑥ Bacterial count

It shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

6) Uncooked Raw Oyster

(1) Definition

Uncooked raw oyster refers to packaged oysters with shells, half shell oysters and shelled oysters which can be consumed as raw (including frozen oysters).

(2) Requirements of raw materials

(a) Uncooked raw oyster should be produced from area which comply with the water quality standard of blue belt following "Standards for Rating Waters for Producing Sedentary Marine Animals and Plants" (Ministry of Agriculture, Food and Rural Affairs Notification) or it should be treated to be comply with standard of blue belt through natural purification[1)] or artificial purification[2)].

(b) Oysters should be sufficiently washed with hygienic water quickly after the collection. Chemical synthetics (except sodium hypochlorite) should not be used.

(c) Uncooked raw oyster shall be packaged in a container (synthetic resin, aluminum box, water resistant manufactured paper) with a cover and stored and distributed at 10˚C or less.

※ Explanation on terms

1) Natural purification: A process of treatment using natural purifying ability after transferring oysters to an area complying with water quality standard in order to reduce the level of microorganisms present in oysters.

2) Artificial purification: A process of treatment using limited underwater environment, such as land facilities, in order to reduce the level of pathogens in oysters.

(3) Specifications

① *Escherichia coli* : Not more than 230 MPN/100 g

(4) Test methods

① *Escherichia coli*

It shall be tested according to 2) The 2nd method, 가. Most Probable Number Method, 3.8. *Escherichia coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

2. Test Methods

1) Description (Sensory test)

During description (sensory test) test, appearance, color and selection test item should be commonly applied to each fishery product. For those with test items designated for each fishery product, the test result shall be not less than 3 points and no one point item when rated according to the following rating standard.

Classification	Item	Rating Standard
Common	Appearance (Shape)	1. No damage or deformation with excellent processing condition (5 points) 2. Almost no damage or deformation with satisfactory processing condition (4 or 3 points depending on the degree) 3. Damaged or deformed with poor processing condition (2 points) 4. Remarkably damaged or deformed with very poor processing condition (1 point)
	Color (Gloss)	1. The unique color of the product is excellent (5 points) 2. The unique color of the product is satisfactory (4 or 3 points depending on the degree) 3. The color is in poor quality (2 points) 4. The color is in remarkably poor quality (1 point)
	Selection	1. The size and quality are uniform and foreign product or defective product is not mixed in (5 points) 2. The size and quality are uniform. None of the foreign product and almost none of the defective product is mixed in (4 or 3 points depending on the degree)
Live fish · Shellfish	Vitality	1. It is alive with no trace of damage by disease and insects and with an excellent vitality (5 points) 2. It is alive with no trace of damage by disease and insects and with a satisfactory vitality (4 or 3 points depending on the degree) 3. It is alive with no trace of damage by disease and insects and with a mediocre vitality (2 points) 4. It is alive with traces of damage by disease and insects or with a poor vitality (1 point)
Fresh ·	Freshness	1. It has an excellent freshness with its unique fresh odor (5 points) 2. It has a good freshness (4 or 3 points depending on the degree of its

Cold-storage products		unique fresh odor) 3. It has a low freshness with a bit of off odor (odor of hydrogen sulfide and ammonia) (2 points) 4. It has a poor freshness with an off odor (odor of hydrogen sulfide and ammonia) (1 point)
Frozen product	Freshness	1. It has an excellent freshness with its unique fresh odor (5 points) 2. It has a good freshness (4 or 3 points depeding on the degree of its unique fresh odor) 3. It has a low freshness with a bit of off odor (odor of hydrogen sulfide and ammonia) (2 points) 4. It has a poor freshness with an off odor (odor of hydrogen sulfide and ammonia) (1 point)
	Drying and rusting	1. It is sufficiently glazed or packaged without a sign of drying or rusting (5 points) 2. The product with a sign of relatively low drying or rusting (4 points depending on the degree) 3. The product with a sign of mediocre drying or rusting (2 points) 4. The product with a sign of severe drying or rusting (1 point)
Dried product	Flavor	1. It has no insect damage and mold with an excellent unique flavor (5 points) 2. It has no insect damage and mold with a satisfactory unique flavor (4 or 3 points depending on the degree) 3. It has no insect damage and mold with a mediocre unique flavor (2 points) 4. It has no insect damage and mold with a poor unique flavor (1 point)
Salted product	Flavor	1. Salt is permeated in the meat evenly and has an excellent unique flavor (5 points) 2. Salt is permeated in the meat evenly and has a satisfactory unique flavor (4 or 3 points depending on the degree) 3. Salt is permeated in the meat a bit unevenly and has a mediocre unique flavor (2 points) 4. Salt is pearmeated in the meat unevenly and has a poor unique flavor (1 points)
Agar	Degree of neatness	1. Strip, square-shaped and powdered agar - The product without quick-freezing, kiln-drying, air-drying and mixing in with earth and sand (5 points)

		- Powder, scaly, other agars - The product with even form and quality (5 points) 2. Strip, square-shaped and powdered agar - The product with very little quick-freezing, kiln-drying, air-drying and mixing in with earth and sand (4 or 3 points depending on the degree) - Powder, scaly, other agars - The product with generally even form and quality (4 or 3 points depending on the degree) 3. Strip, square-shaped and powdered agar - The product with a little quick-freezing, kiln-drying, air-drying and mixing in with earth and sand (2 points) - Powder, scaly, other agars - The product with a little uneven form and quality (2 points) 4. Strip, square-shaped and powdered agar - The product with a lot of quick-freezing, kiln-drying, air-drying and mixing in with earth and sand (1 point) - Powder, scaly, other agars - The product with uneven form and quality (1 point)

2) Bacterial Count

Frozen sample should be thawed at 40˚C or lower in its packaging as quickly as possible, then the surface of its container and packaging is wiped with 70% alcohol cotton. Then it shall be tested according to 3.5.1 General Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

3) Coliform group

The test solution from above 2) shall be tested according to the quantitative method by 나. Desoxycholate Lactose Agar Method, 3.7.2 Quantitative Methods, 3.7 Coliform Group, 3. Microbiological Method in Article 9. General Testing Methods.

4) Tetrodotoxin

It shall be extracted by an acetic acid extraction method and tested according to virulence test method by intraperitoneal injection of mouse.

5) Carbon Monoxide Test Method

(1) Reagent

① Standard Carbon Monoxide : Calibration gas (81.5 μL/L or similar concentration), it should be diluted with air before use.

② Sulfuric acid : Special grade

③ n-octyl alcohol : Special grade

(2) Measurement condition of Gas Chromatograph

① Detector : Flame Ionization Detector (FID)

② Methanizer

③ Reduction temperature : 350~400˚C

④ Column : HP-MOLSIV capillary column (30 m X 0.53 mm ID, 25 μm) or the equivalent

⑤ Column temperature : Inject the sample at the initial temperature of 60˚C and maintain it for 1 minute, elevate the temperature to 120˚C in 2 minutes and maintain it for 2 minutes.

⑥ Temperature of injection port : 150~200˚C

⑦ Temperature of detector : 150~200˚C

⑧ Carrier gas and flow rate : Nitrogen or helium (flow rate should be appropriately adjusted to optimum condition)

(3) Test Method

① General Method

a) Test Method

Ⓐ Immediately after thawing, the sample is peeled and finely cut. Then 300 g of the sample is accurately weighed and water which is twice the amount of the sample and cooled at 4˚C is added. Then the mixture is homogenized in ice-bath (1 minute for frozen tilapia and 30 seconds for frozen tuna and Japanese amberjack (frozen or cold-storage)) and it is used as sample solution.

Ⓑ Add 200 g of sample solution into a centrifuge tube and centrifuge (3,000 rpm, 10 minutes) at 10˚C and obtain the supernatant.

Ⓒ Put 50 mL of supernatant into a 100 mL headspace bottle, add 5 drops of n-octyl alcohol, 5 mL of water, 20 mL of 20% sulfuric acid, sealed the bottle and shaken intensively for 2

minutes. Let the bottle sit still for 10 minutes than shake again for 1 minute, take 1 mL of gas phase inside the bottle using a gas-tight syringe and inject it into the gas chromatograph.

Ⓓ Separately, dilute the standard carbon monoxide using clean air or nitrogen gas to an optimum concentration, take 1 mL of it and inject it into gas chromatograh using a gas-tight syringe. Then, calculate the quantity of carbon monoxide in sample by identifying the calibration curve from the obtained peak area.

In order to calculate the carbon monoxide in fish meat, following coefficient is used.

Weight of 1mL standard carbon monoxide (20˚C) = Concentration of carbon monoxide in standard gas × 1.165 mg

Ⓔ If the detected concentration of carbon monoxide is over 20 μg/kg in frozen tilapia, over 200 μg/kg in frozen tuna but detected less than 500 μg/kg, the sample solution from Ⓐ is added to an open vessel. Using a storing device which allows air circulation, store the vessel at 5˚C for 2 days while stirring so that a fim does not form. Then, the vessel is subjected to the above Ⓑ~Ⓓ procedures and the residue of carbon monoxide is measured.

Ⓕ Compare the concentration of carbon monoxide residue from the sample solution from Ⓐ and the that which was stored at 5˚C for 2 days, then use it to determine the presence of artificial treatment of carbon monoxide.

b) Determination of the presence of carbon monoxide treatment

Ⓐ If the analytical value of sample solution on preparation date is less than 20 μg/kg in frozen tilapia, 200 μg/kg in frozen tuna, it is determined that the carbon monoxide treatment is not used.

Ⓑ If the analytical value of sample solution on preparation date is over 500 μg/kg in frozen tuna and if over 350 μg/kg is detected in Japanese amberjack (frozen or cold-storage), it is determined that the carbon monoxide treatment is used.

Ⓒ If the result of measurement according to (3) ① Ⓔ and Ⓕ is decreased more than 10% than the analytical value of sample solution on preparation date, it is determined that the carbon monoxide treatment is used.

② Test Method for vacuum-packaged frozen tilapia and Japanese amberjack (cold-storage or frozen)

a) Test Method

Take 1.5 mL of clean air using a gas-tight syringe and inject it into the vacuum package, then immediately take 1.0 mL from inside the vacuum package and use it to carry out gas chromatography for quantification.

b) Determination of the presence of carbon monoxide treatment

Ⓐ If detected at less than 10 μL/L,

It shall be determined that the carbon monoxide treatment is not used.

Ⓑ If detected at 10~100 μL/L,

It shall be determined according to the ① General Test Method.

Ⓒ If detected at more than 100 μL/L,

It shall be determined that the carbon monoxide treatment is used.

6) Moisture

(1) Loss on drying method

It shall be tested according to 가. Atmospheric Pressure Heat Drying Method, 1.1.1.1 Weight Reduction by Drying Method, 1.1.1. Moisture, 1. Food Component Test Methods in Article 9. General Testing Methods.

(2) Infrared moisture measurement

2~10 g of sample is taken and added to a drying dish and dried until it becomes a constant weight on an infrared moisture meter(adjusted to 105±1˚C), then calculate the reduced weight and set it as the moisture content)

7) Crude Protein

It shall be tested according to 1.1.3.1 Total Nitrogen and Crude Protein, 1. Food Component Test Methods in Article 9. General Testing Methods.

8) Ash

Accurately weigh 1~2 g of the sample and it is tested according to 1.1.2 Ash, 1. Food Component Test Methods in Article 9. General Testing Methods.

9) Residues Insoluble in Boiling Water

Accurately weigh 5 g of the sample and put it in a beaker and add 300 mL of 0.05 N hydrochloric acid solution, dissolve the sample by boiling it for 5 minutes, the resulting mixture is absorbed and filtered through a glass filter (IG4) which has been previously adjusted to a constant weight, put it in a dryer and dry it at 105˚C and acquire the constant weight.

$$\text{Residues insoluble in boiling water } (\%) = \frac{a-b}{S} \times 100$$

S : Weight of the sample (g)

a : Constant weight after drying (g)

b : Constant weight of glass filter (g)

10) Boric Acid

It shall be tested according to the colorimetry method by using curcumin

(1) Reagent

① Oxalic acid- Acetone solution : Dissolve 50 g of oxalic acid in 500 mL of acetone and filtrate the mixture

② Curcumin solution : Dissolve 0.1 g of curcumin (Special grade) in 400 mL of ethanol.

③ Standard boric acid solution : Dry boric acid (H_3BO_3, special grade) for 5 hours in a desiccator, take 500 mg of it accurately and dissolve it in water to make the final volume of 1L and use it as the standard solution. 1 mL of this solution corresponds to 10 μg of boric acid.

(2) Operation

① Put 1~2 g (amount equivalent to 0.3~0.8 mg of boric acid) of sample in to a porcelain crucible and add 1% sodium carbonate solution to make the mixture alkaline, mix well and evaporated in a water bath, then incinerated in electric furnace at 500˚C.

② Take the incinerated sample is melted by a small amount of hydrochloric acid (1:9) to be acidic, add water to make the final volume of 100 mL.

③ Put 2.0 mL of the resulting solution from above ② in a porcelain crucible, add 1% sodium carbonate solution to make the mixture alkalin then evaporate it in a water bath.

④ After cooling the residue, add 1 mL of hydrochloric acid (1:4), 5 mL of oxalic acid- acetone solution, 2 mL of curcumin solution, then it is heated at 55±2˚C for 2 hours and 30 minutes in a constant temperature water bath.

⑤ After cooling the resultant from above ④, 20~30 mL of acetone is added to dissolve the residue, transfer the mixture into a measuring flask (100 mL), wash the residues with acetone for several times to make the final volume of 100 mL. Then its absorbance is measured at 540 nm.

⑥ Separately, take 0.5~4 mL of the standard boric acid several times and measure the absorbance as above. Acquire the calibration curve and make corrections by carrying out a blank test simultaneously.

(3) Calculation

$$\text{Boric acid (\%)} = \frac{A}{S} \times V \times \frac{1}{10{,}000}$$

S = Weight of sample (g)

A = Concentration of test solution acquired from calibration curve (μg)

V = Dilution factor

11) Histamine

(1) Range of application for test method

Apply to a method for histamine in food including fishery products.

(2) Principle of analysis

After histamine in food is extracted using hydrochloric acid, it is subjected to derivatization by dansyl chloride and analyzed using high speed liquid chromatography.

(3) Equipment

Liquid chromatography : ultraviolet photometric detector

(4) Reagent and test solution

① Acetonitrile : for HPLC or the equivalent

② Water : Distilled water or the equivalent

③ 0.1 N hydrochloric acid : To 10 mL of 10 N hydrochloric acid, add water to make the final volume of l L

④ Saturated sodium carbonate solution: To approximately 46 g of sodium carbonate, add water to make the final volume of 100 mL

⑤ 1% dansyl chloride acetone solution : To 1 g of dansyl chloride, add acetone to make the final volume of 100 mL

⑥ 10% proline solution : To 10 g of proline, add water to make the final volume of 100 mL

⑦ Ether : Reagent grade of the equivalent

⑧ Standard stock solution : Accurately weigh histamine and dissolve it in 0.1 N hydrochloric acid to make the final volume of 1 mL

⑨ Internal standard stock solution : Accurately weigh standard 1,7-diaminoheptane and dissolve it in 0.1 N hydrochloric acid to make the final concentration of 5 mg/mL.

⑩ Standard solution : Take each of the stock solution and add 0.1 N hydrochloric acid to make the final concentration of 50 μg/mL for each.

⑪ Internal standard solution : Add 0.1 N hydrochloric acid to the internal standard stock solution to make the final concentration of 100 μg /mL

⑫ Calibration curve standard solution : Add 0.1 N hydrochloric acid to the standard solution to make 5 appropriate concentrations (μg /mL) before use

⑬ System conformance solution : Take cadarverine and histamine and add 0.1 N hydrochloric acid to make the final concentration of 50 μg /mL for each.

(5) Preparation of test solution

Take 5 g of sample accurately, add 25 mL of 0.1 N hydrochloric acid, homogenize and centrifuge (4,000 G, 4˚C, 15 min) the mixture, repeat filtration twice and combine the supernatant. Then add 50 mL of 0.1 N hydrochloric acid and use the prepared mixture as a test solution.

(6) Derivatization

Add 1 mL of standard solution and test solution each to a glass test tube with a stopper. Then, add 100 μL of internal standard solution, then add 0.5 mL of saturated sodium carbonate

solution and 0.8 mL of 1% dansyl chloride acetone solution, mix together, plug the test tube with a stopper, derivatize it for 1 hour at 45˚C. To the derivatized standard solution and test solution, add 0.5 mL of 10% proline solution and 5 mL of ether, stir the mixture for 10 minutes. After collecting the supernatant, it is subjected to nitrogen concentration, and then 1 mL of acetonitrile is added to it. Filter the mixture and analyze the filtrate with high speed liquid chromatography.

(7) Test operation

a) Measurement condition of liquid chromatography

① Detector : Ultraviolet spectrophotometry (UV), 254 nm

② Column : C_{18} (4.6 × 250 nm, 5 μm) or the equivalent

③ Column temperature : 40˚C

④ Mobile phase : The mixture of acetonitrile and water (maintain 55% acetonitrile for first 10 minutes, then maintain it for 5 minutes by making it 65% for up to 15 minutes, 80% for up to 20 minutes. Then, maintain it for 5 minutes by making it 90% for up to 30 minutes)

⑤ Flow rate of mobile phase : 1 mL/min

⑥ System conformance : When 10 μL of system conformance solution is operated following the above condition, cadarverine then histamine is flowed out and the separation degree should be more than 1.5.

b) Qualitative test

The retention time of histamine's peak in test solution chromatograph should coincide with that of each standard substance's peak.

c) Quantitative test

Draw a calibration curve by setting the area ratio [A_S/A_{IS}] of standard substance in each standard solution and internal standard substance on the Y-axis and the histamine concentration (μg/g) of calibration curve standard solution on the X-axis. Also, calculate the concentration of histamine by substituting the area ratio [A_{SAM}/A_{SAMIS}] of test solution and internal standard substance on the Y-axis.

As : Peak area of standard substance in standard solution

A_{IS} : Peak area of internal standard substance in standard solution

A_{SAM} : Peak area of histamine in test solution

A_{SAMIS} : Peak area of internal standard substance in test solution

Article 7. Standards and Specifications for Prepared Foods in Food Service Businesses (including Catering Businesses)

Article 7. Standards and Specifications for Prepared Foods in Food Service Businesses (including Catering Businesses)

1. Definition

'Prepared foods in food service businesses (including catering businesses)' refers to all foods (including beverages, draft beer, etc.) which are not intended for distribution and sales but are directly provided to the consumer through cooking, etc.

2. Standards of Raw Material

1) Requirements of raw material

(1) Raw materials should be fresh and should not be rotten or spoiled and not be contaminated by harmful or poisonous substances.

(2) Water used for washing the raw materials and equipment, cooking and drinking should meet the water quality standard in 「Drinking Water Standards」 and Norovirus should not be detected (except tap water).

(3) Ices used in food service businesses shall have a bacterial count of not more than 1,000 per 1 mL and shall be negative for *Escherichia coli* and *Salmonella* spp. in 250 mL. Other physic-chemical specifications of ices shall meet the standards and specifications for 29-17 Ices in Article 5. Standard and Specifications for Each Food Product.

(4) Animal or plant raw materials which are not collected, handled, processed, manufactured or managed for the purpose of human consumption should not be used in cooking.

2) Storage and Preservation of Raw Material

A) General rules

(1) All food stuffs shall be handled hygienically and stored in a manner so they are not contaminated by hazardous organisms such as mice and cockroaches.

(2) Food stuff shall not be stored together with cleaning products, harmful chemical substances, pesticides and poisonous substances, etc.

(3) Food stuffs, to which standard and specification have been specified, shall be stored according to the specified standard and specification. Among agricultural, forest, animal and fishery products those raw materials which require the continuous freshness shall be stored frozen or refrigerated.

(4) Those food stuffs or processed foods which can be directly used in foods after preprocessing such as washing shall be placed in a container and stored in a clean place to avoid contamination from floor.

(5) Except those individually labeled, those food products which should be stored refrigerated shall be stored below 10˚C and those food products which should be stored frozen shall be stored at below -18˚C or less.

(6) Thawing of the frozen food

① Thawing the frozen food shall be carried out hygienically.

② Those foods which are not used immediately after thawing shall be stored refrigerated until cooking.

③ Thawed food product shall not be frozen again.

B) Specific food product

(1) Cereals (Rice, barley, wheat flour, etc.)

① Shall be stored hygienically in a cool dry place.

② Shall be stored in a manner to avoid the formation of mold and discoloration.

(2) Fats and oils (sesame oil, perilla oil, brown rice oil, corn oil, soybean oil, etc.) and nuts with high fat and oil content shall be stored in a cool place away from direct sunlight or shall be stored refrigerated or frozen.

(3) Livestock and fishery products (beef, pork, fish, etc.) shall be packaged separately in a hygienic manner and shall be stored refrigerated or frozen separated from other foods by container, packaging, etc.

(4) Fruits and vegetables (apple, pear, peach, grape, Chinese cabbage, radish, onion, cucumber, cabbage, spinach, etc.) shall be stored in a manner that washed fruits · vegetables and unwashed fruits · vegetables do not get mixed together.

(5) Other foods

① Seasoned product shall be stored with a stopper or a cover to prevent mixing foreign materials or contamination.

② Bean curds shall be refrigerated.

3. Standards of Cooking and Management

(1) The acid value of frying oil in use shall be not more than 3.0.

(2) The equipment that directly contacts foods shall be managed to avoid contamination due to corrosion, etc.

(3) Cooked foods shall be placed in a hygienic container to avoid cross-contamination from uncooked foods.

(4) Among cooked foods, cold foods such as meat broth for cold noodle shall be stored at below 10˚C and warm foods shall be stored at 60˚C or more, if possible.

(5) Water in fish tank for holding fishes and shellfishes shall be managed hygienically. However, substances inevitably used for the purpose of defoaming and filtering of fish tank shall be usable as food material or shall meet the component specification of chlorine dioxide, silicon dioxide and silicone resin among food additives.

(6) If detergent is used to wash vegetables or fruits, it shall meet the specification of washing detergent for vegetables and fruits under「Standard and Specification of Hygiene Products」(Ministry of Health and Welfare Notification). Also, the detergent shall not be used for the washing of other products other than vegetable and fruits.

(7) Frozen products which can be consumed directly by consumers can be thawed and sold only within 24 hours after thawing.

4. Specifications

A) Cooked foods, etc.

(1) Appearance : Require to have its own unique flavor, color, taste without off-flavor or off-taste

(2) Foreign materials : Foreign materials over some degree which cannot be further removed during the processing of raw materials and contaminated unhygienic foreign materials shall not be contained in foods. This excludes foreign

materials remain in food as other food, epidermis of raw plant materials or soil which may not be completely removed during normal cooking process and their residual amount is small and would not cause a health concern.

(3) Coliform group : Shall be negative

(4) Bacterial count : Shall not be more than 3,000/g (Limited to slushes. Slushes refer to completely packaged beverages such as soft drinks, products made by grinding with ice after directly mixing with water and powdered juice or beverages made to be semi-frozen using ice cream machine. Products containing dairy products, lactobacillus, fermented products and unheated products are excluded).

(5) Food poisoning bacteria : Cooked foods from food service businesses(including catering business) shall be negative for food poisoning bacteria such as *Salmonella* spp., *Staphylococcus aureus, Listeria monocytogens,* enterohemorrhagic *E. coli*, *Campylobacter jejuni, Yersinia enterocolitica, Vibrio parahaemolyticus* and *Clostridium perfringens* shall not be more than 100 per g, and *Bacillus cereus* shall not be more than 10,000 per g. However, in foods which are not heat-treated or cooked after heat-treatment during cooking process, *Staphylococcus aureus* shall not be more than 100 per g.

B) Drinking water in food service businesses

(1) *Escherichia coli* : Negative/250 mL

(2) *Salmonella* spp. : Negative/250 mL

(3) *Yersinia enterocolitica* : Negative/250 mL

C) Cooking utensils, etc.

(1) Water in fish tank

① Bacterial count : Not more than 100,000 per 1 mL

② Coliform group : Not more than 1,000/100 mL

(2) Dishcloth (excluding the ones in use)

① *Escherichia coli* : Shall be negative

(3) Knifes, cutting boards and items used during eating or handling food such as spoons, chopsticks, dishes and bowls (excluding the ones in use)

① *Salmonella* spp. : Shall be negative

② *Escherichia coli* : Shall be negative

5. Test Methods

1) Sampling and sample handling

(1) Sampling method

Conduct sampling according to Article 8. Sampling and Sample Handling Methods.

(2) Test solution

Test solution shall be prepared according to 3.3 Test Solution Preparation, 3. Microbiological Methods described in Article 9. General Testing Methods.

2) Foreign substances

It shall be tested according to 9.2 Foreign Substances in Article 9. General Testing Methods.

3) *Escherichia coli*

(1) It shall be tested according to 3.8 *Escherichia coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

(2) In order to conduct *Escherichia coli* test for drinking water in food service businesses, filter 250 mL of sample by a membrane filtration method. Then place the filter paper on an EMB agar plate and culture it at 35˚C for overnight. Once typical colonies are identified, conformation identification shall be conducted according to 3) Limit Test, 3.8.1 Qualitative Test of *Escherichia coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

4) Bacterial count

It shall be tested according to 3.5 Bacterial Count, 3. Microbiological Methods in Article 9. General Testing Methods.

5) *Samonella* spp.

(1) It shall be tested according to 3.11 *Samonella* spp., 3. Microbiological Methods in Article. 9 General Testing Methods.

(2) In order to conduct *Salmonella* spp. test for drinking water in food service businesses, filter 250 mL of ample by membrane filtration method. Then place the filter paper on a MacConkey agar plate (medium 30) or Desoxycholate citrate agar plate (medium 31) and culture it at 35˚C for 24 hours. Once typical colonies are identified, conformation identification shall be conducted according to 3) Conformation Test, 3.11 *Samonella* spp., 3. Microbiological Methods in Article 9. General Testing Methods.

6) *Staphylococcus aureus*

It shall be tested according to 3.12 *Staphylococcus aureus*, 3. Microbiological Methods in Article 9. General Testing Methods.

7) *Listeria monocytogens*

It shall be tested according to 3.15 *Listeria monocytogens*, 3. Microbiological Methods in Article 9. General Testing Methods.

8) Enterohemorrhagic *E. coli*

It shall be tested according to 3.16 Enterohemorrhagic *E. coli*, 3. Microbiological Methods in Article 9. General Testing Methods.

9) *Campylobacter jejuni*

It shall be tested according to 3.19 *Campylobacter jejuni*, 3. Microbiological Methods in Article 9. General Testing Methods.

10) *Yersinia enterocolitica*

(1) It shall be tested according to 3.17 *Yersinia enterocolitica*, 3. Microbiological Methods in Article 9. General Testing Methods.

(2) In order to conduct *Yersinia enterocolitica* test for drinking water in food service businesses, filter 250 mL of ample by membrane filtration method. Then place the filter paper on a CIN agar plate (medium 45) and culture it at 30˚C for 24~48 hours. Once typical colonies are identified, conformation identification shall be conducted according to 3) Conformation Test, 3.17 *Yersinia enterocolitica*, 3. Microbiological Methods in Article 9. General Testing Methods.

11) *Vibrio parahaemolyticus*

It shall be tested according to 3.13 *Vibrio parahaemolyticus*, 3. Microbiological Methods in Article 9. General Testing Methods.

12) *Clostridium perfringens*

It shall be tested according to 3.14.2 Quantitative Test of *Clostridium perfringens*, 3. Microbiological Methods in Article 9. General Testing Methods.

13) *Bacillus cereus*

It shall be tested according to 3.18.2 Quantitative Test of *Bacillus cereus*, 3. Microbiological Methods in Article 9. General Testing Methods.

14) Acid value

It shall be tested according to 1.1.5.3.1 Acid Value, 1.1.5.3 Geologic Chemical Tests, 1.1 General Component Methods in Article 9. General Testing Methods.

15) Peroxide value

It shall be tested according to 1.1.5.3.5 Peroxide Value, 1.1.5.3 Geologic Chemical Tests, 1.1 General Component Methods described in Article 9. General Testing Methods.

16) Coliform group

It shall be tested according to 가. Most Probable Number Method, 3.7.2 Quantitative Test of Coliform Group, 3. Microbiological Methods in Article 9. General Testing Methods

○ Membrane Filtration Method

1. Membrane filter equipment and instrument

(1) Filter membrane

Use a membrane with less than 0.45 μm in pore diameter and 47 mm in diameter.

(2) Filtering equipment

Use equipment that enables filtration by placing a filter membrane and able to be sterilized.

2. Filtration of the sample solution

Place a filter membrane with grid-side up correctly in sterilized filtration equipment, fixate the funnel with a clamp, pour 250 mL of sample solution aseptically and filter it. Take the filter paper using a sterilized tweezer and carefully place it on each culture medium (be careful not to form bubbles) and culture it.

Annex

[Annex 1] The List of Raw Materials Allowed in Food

1. Plant Derived Raw Materials

	English Name/ Latin Name/ Scientific Name	**Parts (Name of crude drug)**
1	Soursop, Guanabana *Annona muricata*	Fruit
2	*Euryale ferox*	Fruit, seed(芡仁, Euryales Semen)
3	*Ailanthus altissima*	Leaf
4	*Polygonatum humile*	Leaf, stem, rhizome
5	*Phragmites communis*	Sprout, root (蘆根, Phragmitis rhizoma)
6	galangal *Alpinia officinarum*	Root
7	Sea buckthorn *Hippophae rhamnoides* L.	Fruit, leaf
8	*Vicia amoena*	Sprout
9	*Galium spurium*	Leaf, sprout
10	*Diospyros kaki* Thunb.	Fruit, leaf
11	*Glycyrrhiza uralensis* Fischer/*Glycyrrhiza glabra Linne/* *Glycyrrhiza inflate* Batal.	Root, rhizome(甘草)
12	*Sasa borealis var. chiisanensis*	Leaf, sprout
13	*Actinidia polygama* Miquel	Fruit(木天蓼, Actinidae Fructus), sprout, stem
14	*Artmisia Annua* L.	Leaf, stem
15	*Oenanthe javanica var. japonica*	Leaf, stem
16	*Artemisia apiacea*	Sprout
17	*Corylus heterophylla*	Fruit
18	*Naematoloma sublateritium*	Fruit body
19	Black Mulberry *Morus nigra*	Fruit
20	Black Truffles *Tuber melanosporum*	Fruit body
21	*Cacalia adenostyloides*	Sprout
22	*Gentiana lutea* Linne	Root, rhizome(龍膽, Gentianae

		scabrae Radix)
23	*Cinnamomum aromaticum Nees Cinamomum cassia Presl*	Branch(桂枝,Cinnamomi Ramulus), stem, skin(肉桂,Cinnamomi Cortex)
24	*Alpinia officinarum* Hance	Rhizome(高良薑)
25	Pained maple, korosoe tree *Acer pictum subsp.* Mono(Maxim.) Ohashi	Sap
26	*Coriandrum sativum LINNAEUS.*	Fruit(Coriandri Fructus), leaf
27	*Diospyros lotus*	Fruit, leaf
28	*Ligularia stenocephala*	Leaf
29	Guarana *Paullinia cupana H.B.K.*	Fruit
30	*Lycium chinensis*	Leaf, fruit(枸杞子, Lycii Fructus), root(地骨皮)
31	Turkey tail *Tramtes versicolor*	Fruit body
32	Gooseberry *Ribes uva-crispa* L*., Ribes grossularia* L.	Fruit
33	*Chrysanthemum morifolium Ramat./ Chrysanthemum indicum*	Flower, whole plant(甘菊)
34	*Citrus unshiu* Markovich	Fruit, fruit skin(陳皮, Citrus peel, 青皮)
35	Grains of paradise *Amomum nelegueta*	Seed
36	*Boletus edulis*	Fruit body
37	*Rosa laevigata*	Fruit(金櫻子, Rosae Laevigatae Fructus)
38	Chufa *Cyperus esculentus* L.	Tuber
39	*Litsea japonica*	Fruit
40	CAMU-CAMU *Myrciaria dubia*	Fruit
41	Calamondin orange *Citroforthnella microcarpa*	Fruit
42	*Boletus impolitus*	Fruit body
43	*Sparassis crispa*	Fruit body

44	Chanterelle *Cantharellus cibarius* Fr.	Fruit body
45	*Prunella vulgaris* L.	Sprout, leaf, flower stalk(夏枯草, Prunellae Spica)
46	*Cacalia auriculata*	Leaf
47	Raspberry *Rubus* spp.	Fruit, leaf
48	Tree tomato *Cyphomandra betacea (Cav.) Sendt.*	Fruit
49	*Suaeda asparagoides Makino*	Sprout, leaf
50	*Momordicae grosvenori*	Fruit
51	*Raphanus sativus* L.	Seed(Raphani Semen)
52	*Valeriana dagcletiana*	Leaf
53	Noni *Morinda citrifolia*	Fruit
54	Gold oyster mushroom *Pleurotus cornucopiae var. citrinopileatus*	Fruit body
55	*Hericium erinacium*	Fruit body
56	*Celastrus orbiculatus*	Leaf
57	Glory bower *Clerodendron trichotomum*	Sprout
58	*Beech mushroom* *Hypsizygus marmoreus*(Peck) H.E. Bigelow/*H.tessulatus*	Fruit body
59	*Sarcodon asparatus*	Fruit body
60	Niger *Guizotia abyssinica (L.f.) Cass.*	Seed
61	*Lepidium apetalum*	Sprout
62	*Actinidia arguta*	Fruit, sprout, stem
63	*Hygrophorus russula Quel.*	Fruit body
64	*Amantita caesarea*	Fruit body
65	Tartarian buckwheat *Fagopyrum tataricum* (L.) *Gaertn.*	Seed
66	Evening primrose *Oenothera odorata*	Seed

67	Dayflower *Commelina communis*	Sprout
68	Sweet orange *Citrus sinensis*	Fruit
69	*Malva sylvestris* L.	Flower, leaf
70	Bamboo, Bambusoidae *Cannabis sativa* Linne	Shoot, leaf
71	Hemp *Cannabis sativa* Linne	Seeds with shells(bract and episperm) completely removed (麻仁, Cannabis Semen)
72	*Polygonatum falcatum*	Leaf, rhizome
73	Cranberry *Vaccinium macrocarpon*	Fruit
74	*Canavalia gladiatia*	Fruit
75	*Platycodon grandiflorum* A. De Candolle	Root(桔梗, Platycodi Radix)
76	*Benincasa hispida*	Fruit, seed(冬瓜子)
77	*Helianthus tuberosus*	Tuber
78	*Encommia ulmoides* Oliver	Bark(杜沖, Eucommiae Crotex)
79	Bog bilberry *Vaccinium uliginosum*	Fruit
80	*Lyophyllum shimeji (Kawam.) Hongo*	Fruit body
81	*Imperata cylindrica Beauvois*	Root(茅根, Imperatae Rhizoma)
82	Lavender *Lavandula angustifolia/ Lavandula vera/* *Lavandula officinalis Chaix.*	Flower, leaf
83	Lime blossom *Tilia x europea* L.	Flower, leaf
84	Langsat, Duku, Longkong *Aglaia domestica (Corrêa em. Jack) Pellegrin/ Aglaia aquea (Jack) Kosterm./* *Lansium domesticum Corrêa/ Lansium javanicum Roem./* *Aglaia dookoo Griff/ Lansium aqueum (Jack) Roem.*	Fruit
85	Red currant *Ribes rubrum* L./ *Ribes sativum Syme./ Ribes triste Pall.*	Fruit
86	Lemon grass	Leaf, stem

	Cymbopogon citratus	
87	Lemon balm *Melissa officinalis* L.	Leaf
88	Lemon verbena *Aloysia triphylla*	Leaf
89	Lady's mantle *Alchemilla vulgaris* L.	Leaf
90	Locoto, Cayenne pepper *Capsicum baccatum*	Fruit
91	Lulo, Naranjilla *Solanum quitoense*	Fruit
92	Rooibos *Aspalathus lineraris*	Leaf
93	Mountoin Ash *Sorbus commixta*	Fruit
94	*Polygonum aviculare*	Leaf
95	Water nut, Water chestnut *Trapa japonica*	Fruit
96	Marigold, Pot marigold	Flower
97	Marshmallow *Althaea officinalis*	Flower, root
98	Marjoram *Origanum majorana*	Leaf, stem
99	*Euscaphis japonica*	Sprout
100	*Erigeron canadensis* L.	Sprout, leaf
101	*Dictyophora indusiata*	Fruit body
102	*Coprinus comatus*	Fruit body
103	Meadowsweet *Filipendula ulmaria* (L.) *Maxim./* *Spiraea ulmaria* L.	Flower
104	*Fagopyrum esculentum Moench*	Leaf, stem, flower, seed
105	Melindjo *Gnetum gnemon*	Leaf, flower
106	*Persicaria perfoliata/ polygonum perfoliatum*	Sprout
107	*Angelica keiskei*	Root

108	*Adenophora remotiflorus* Miquel	Root(薺泥, Remotiflori Radix)
109	Ramie *Boehmeria nivea* (L.) *Gaudich.*	Sprout
110	Fragrant olive *Osmanthus fragrans*	Flower
111	Nalta jute, Tussa jute *Corchorus olitorius* L.	Leaf
112	*Commiphora molmol* Engler or other plants in the same genus	Gum resin(沒藥, Myrrha)
113	Cresson *Nasturtium officinale*	Leaf
114	*Myosotis sylvatica Hoffm./* *Myosotis alpestris F.W. Schmidt*	Flower
115	Water mimosa *Neptunia oleracea Lour.*	Leaf, stem, pod
116	American Ginseng *Panax quinquefolius*	Root, leaf
117	*Taraxacum mongolicum H. Mazz.*	Sprout, leaf, root, whole plant(蒲公英, Taraxaci Herba)
118	*Cacalia hastata*	Sprout
119	Milk thistle *Silybum marianum L.*	Leaf, seed
120	Banaba *Lagerstroemia speciosa Pers.*	Fruit, leaf
121	Jackfruit *Artocarpus heterophyllus*	Fruit
122	*Ocimum basilicum*	Leaf, stem
123	*Mentha arvensis Linne var. piperascens Malinvaud* or its interspecific hybrid	Above-aerial part(薄荷, Menthae Herba)
124	Common Sow Thistle *Sonchus oleraceus*	Leaf
125	*Isodon japonicus*	Leaf
126	*Agastache rugosa O. Kuntze*	Leaf
127	*Lilium lancifolium* Thunberg or other closely related plants in the same genus	Bulb(百合, Lilii Bulbus)

128	*Duchesnea indica*	Fruit
129	*Tetragonia tetragonoides*	Leaf
130	*Cnidium monnieri*	Fruit
131	Bergamot, Bergamot orange *Citrus fruits bergamia*	Fruit
132	Berry gold, LASOORA *Cordia latifolia*	Fruit
133	Velvet bean *Mucuna pruriens*	Sprout, Fruit (check pre-treatment)
134	Chickweed *Stellaria media*	Sprout
135	*Glechoma hederacea* L.	Sprout, leaf
136	*Cacalia firma*	Leaf
137	*Russula subdepallens*	Fruit body
138	Borage *Borago officinalis*	Leaf, flower, seed
139	*Rubus coreanus* Miquel	Fruit(覆盆子, Rubi Fructus)
140	Pink Oyster mushroom	Fruit body
141	Red mulberry *Morus rubra*	Fruit
142	Red clover *Trifolium pratense* L.	Leaf
143	Brazil nut *Bertholletia excelsa*	Nut
144	Bladderwrack *Fucus vesiculosus*	Whole plant
145	Black Morels *Morchella elata*	Fruit body
146	Black berry *Rubus* spp.	Fruit, leaf
147	*Suillus luteus*	Fruit body
148	Red gram, Pigeonpea *Cajanus cajan* (L.) *Millsp.*	Seed
149	*Ulmus pumila* L.	Bark, leaf

150	*Torreya nucifera S. et Z.*	Fruit, seed(榧子, Torreyae semen)
151	*Eriobotrya japonica (Thunb.) Lindl.*	Fruit (except seed)
152	Bignay *Antidesma bunius*	Fruit
153	Bilberry *Vaccinium myrtillus*	Fruit, leaf
154	Breadnut, kamansi *Artocarpus camansi*	Fruit
155	*Morus alba* L.	Fruit(桑심子, Mori Fructus), leaf, branch(桑枝, Mori Ramulus), rhizodermis(桑白皮, Mori Cortext)
156	*Armillariella mellea*	Fruit body
157	*Craterellus cornucopioides*	Fruit body
158	Sarsaparilla *Smilax aspera* L.	Sprout
159	*Adenophora triphlla* var. *japonica* Hara or other plants in the same genus	Root(沙蓼, Adenophorae Radix)
160	Oyster mushroom *Pleurotus florida*	Fruit body
161	*Artemisia capillaris Thunberg*	Above-aerial part(茵蔯蒿, Artemisiae Capillaris Herba)
162	*Crocus sativus* Linne	Stigma(Crocus)
163	*Thymus quinquecostatus Celakovski* or other plants in the same genus	Whole plant(麝香草, Thymi Herba)
164	Oyster mushroom *Pleurotus pulmonarius Qu'el*	Fruit body
165	*Pyrus ussuriensis*	Fruit
166	*Crataegus pinnatifida* Bunge. and its variety	Fruit(山査, Crataegi Fructus)
167	*Cornus officinalis* Siebold & Zucc.	Fruit(山茱萸)
168	*Dioscorea batatas* Decaisne/ *Dioscorea japonica* Thunberg	Rhizome(山藥, Dioscoreae Rhizoma)
169	*Zingiber officinale* Roscoe	Rhizome(乾薑,Zingiberis Rhizoma Siccus)
170	*Lindera obtusiloba*	Leaf

171	*Rosa davurica*	Fruit, petal, sprout
172	Dandelion *Taraxacum officinale Wiggers*	Sprout, leaf, root
173	Dill *Anethum graveolens* L.	Fruit
174	*Opuntia ficus-indica*	Fruit, flesh of stem
175	*Aster glehni*	Sprout
176	Sage *Salvia officinalis* L.	Leaf
177	*Pinus densiflora Sieb & Zucc./* *Pinus sylvestris* L.	Pollen, sprout, leaf, branch, stem
178	*Perilla frutescens* Britton var. acuta Kudo/ *Perilla frutescens* Britton var. crispa Decaisne	Leaf, terminal branch (紫蘇葉, Perillae Herba), seed(紫蘇子, Perillae Semen)
179	Truffle *Tuber aestivum(Wulfen) Pers./Tuber melanosporum Vittad.*	Fruit body
180	*Equisetum arvense* L.	Leaf
181	Purslane *Portulaca oleracea L.*	Leaf, sprout, stem
182	*Hydrangea serrata SERINGE*	Leaf
183	*Synurus deltoides*	Leaf
184	*Luffa cylindrica*	Young fruit
185	Sorrel *Rumex acetosa* L.	Leaf, root
186	*Boletus auripes*	Fruit body
187	Shallot *Allium ascalonicum*	Root
188	*Lycopus lucidus* Turczaininnov	Above-aerial part(澤蘭, Lycopi Herba)
189	Staranise *Illicum verum*	Fruit(八角茴香, Anisi Stellati Fructus), seed
190	*Stevia rebaudiana*	Leaf
191	Passion flower *Passiflora incarnata* L.	Fruit, leaf

192	Citron *Citrus medica*	Skin, fruit
193	Adam's needle *Yucca filamentosa/Yucca smalliana Fern.*	Petal
194	Horehound *Marrubium vulgare*	Leaf, flower
195	Agrimony *Agrimonia eupatoria* L.	Leaf, stem
196	Anise *Pimpinella anisum* L.	Fruit
197	Screw pine *Pandanus odoratissimus*	Fruit
198	Arabian Jasmine *Jasminum sambac/ Jasminum auriculatum*	Flower
199	Black chokeberry *Aronia melanocarpa*	Fruit
200	*Amaranthus hypochondriacus/Amaranthus cruentus/* *Amaranthus caudatus/Amaranthus edulis/Amaranthus hybridus*	Seed, leaf
201	*Pleurotus ferulae*	Fruit body
202	Irish moss *Chondrus crispus*	whole plant
203	Artichoke *Cynara scolymus* L.	Sprout, leaf
204	*Aloe ferox* Miller/*Aloe Africana* Miller/species of *Aloe spicata* Baker	Sap extracted from leaf(Aloe)
205	*Rumex acetocella* L.	Sprout, leaf
206	*Syneilesis aconitifolia*	Leaf
207	Apple mint, Round-leave mint *Mentha rotundifolia*	Leaf
208	Yanang *Tiliacora triandra*	Leaf
209	*Lilium auratum*	Root
210	*Artermisia argyi, Artemisia, princeps* Pamp. Var. *orientlis* Hara, *Artemisia Montana*	Leaf
211	*Zingiber mioga*	Flower bud, leaf (sprout)

212	*Cacalia pseudo-taimingasa*	Leaf
213	*Sasa veitchii*	Leaf
214	*Kalopanax pictus*	Leaf, bark
215	*Cirsium maackii/ Cirsium japonicum*	Sprout, leaf, whole plant(Cirsii herba)
216	Elderberry, American elder *Sambucus nigra, Sambucuscandadensis*	Fruit(heat treatment), flower
217	*Persicaria hydropiper* L.	Sprout, leaf
218	Oyster mushroom *Pleurotus sajor-caju*	Fruit body
219	Button mushroom *Agaricus bitorquis*	Fruit body
220	*Momordica charantia* L.	Fruit
221	*Nelumbo nucifera GAERTNER*	Root(蓮根), flower, leaf
222	Yellow boletus *Boletus luteus/ Boletus granulatus*	Fruit body
223	*Acanthopanax sessilifolrum* Seeman or other plants in the same genus	Bark of root, stem and branch(五加皮, Acanthopanax Root Bark)
224	Oregano *Origanum vulgare* L.	Leaf
225	*Schisandra chinensis* Baillon	Fruit(五味子)
226	*Olea europaea*	Leaf
227	*Eleocharis Kuroguwai Ohwi*	Seed, root
228	*Leccinum rugosiceps*	Fruit body
229	*Ulmus macrocarpa* Hance	Bark(榆白皮, Ulmi Cortex)
230	*Polygonatum involuctatum*	Rhizome
231	Wangsongi *Tricholoma giganteum*	Fruit body
232	*Dimocarpus longan* Loureiro	Arillus(龍眼肉, Logan Arillus)
233	*Cacalia krameri*	Leaf
234	*Brassica campestris* L.	Whole plant
235	Yucca *Yucca brevifolia/ Yucca schidigera*	Root

236	*Myristica fragrans* Houttuyn	Seed(肉豆寇,Myristicae Semen)
237	*Clematis mandshurica*	Leaf
238	*Tylopilus eximius*	Fruit body
239	*Kalopanax septemlobus*(Thunb. Ex Murray) Koidz./ *Kalopanax pictus* Nakai	Leaf, bark(海桐皮, Kalopanacis Cortex)
240	*Prunus japonica*	Fruit
241	*Geranium nepalense*	Leaf
242	Indian sarsaparilla, Hemidesmus *Hemidesmus indicus* (L.) *W. T. Aiton*	Leaf
243	Ginseng *Panax ginseng* C.A.Meyer.	Leaf
244	Japanese Hawthorn *Grataegus cuneata* Siebold & Zucc.	Fruit
245	*Grifola frondosa*	Fruit body
246	*Korean Birch* *Betula platyphylla var. japonica*(Miq.) Hara	Sap
247	*Pinus koraiensis S. et Z.*	Seed, leaf
248	*Rosa* spp.	Fruit, petal, sprout
249	Prickly Pear, Indian fig *Opuntia humifusa/ Opuntia compressa*	Fruit
250	*Dendropolyporus umbellatus Fries/* *Grifola umbellatus*	Sclerotium
251	Oyster mushroom *Pleurotus abalonus*	Fruit body
252	*Panax notoginseng*	Root(三七, Notoginseng Radix)
253	*Syzygium aromaticum* Merrill et Perry	Leaf, flower bud (丁香, Syzygii Flos)
254	*Viola mandshurica W. Becker*	Sprout, leaf
255	*Dolichos lablab* L.	Seed
256	*Lysimachia vulgaris* L *var. davurica Led.*	Sprout, leaf
257	Japanese yew *Taxus cuspidata* Siebold & Zucc.	Fruit (except seed)
258	*Polygonatum lasianthum*	Rhizome
259	*Zizania latifolia (Griseb.) Turcz. ex Stapf*	Leaf, stem, seed

260	Chinese water chestnut *Eleocharis dulcis*	Fruit
261	*Lithospermum erythrorhizon Siebold et Zuccarini*	Root(紫根, Lithospermi Radix)
262	*Rhododendron mucronulatum Turcz.*	Flower
263	*Siegesbeckia glabrescns Makino.*	Sprout, leaf
264	*Citrus fruits unshiu MARKOVICH*	Skin
265	*Agrimonia pilosa*	Leaf
266	*Rosa multiflora*	Fruit(營實, Rosae Fructus), leaf, petal, sprout
267	*Cassia mimosoides var. nomame Makino*	Whole plant
268	*Cacalia koraiensis*	Leaf
269	Quercus, Oriental chestnut Oak *Quercus acutissima*	Fruit
270	*Ulmus parvifolia* Jacq.	Bark, leaf
271	*Angelica gigas* Nakai	Root(當歸, Angelicae Gigantis Radix)
272	*Euonymus sieboldianus*	Leaf
273	*Cedrela sinensis A. Juss.*	Sprout, leaf
274	*Gastrodia elata*	Root(天麻, Gastrodiae Rhizoma)
275	*Rubus suavissimus S. Lee*	Leaf
276	*Pterocarya paliurus*	Leaf
277	Chinese artichoke *Stachys sieboldii Miq.*	Root
278	*Polygonatum stenophyllum*	Rhizome
279	*Pueraria lobata* Ohwi	Root(葛根, Puerariae Radix)
280	Cassabanana *Sicana odorifera*	Fruit
281	Kakadu plum *Terminalia ferdinandiana*	Fruit
282	Kaffir lime *Citrus fruits hystrix*	Leaf
283	Caraway *Carum carvi.* L.	Seed
284	Chamomile	Flower, leaf

	Chamomilla recutita/ Matricaria recutita/ *Chamaemelum nobile/ Anthemis nobilis*	
285	California blackberry *Rubus macropetalus*	Fruit
286	Caper *Capparis spinosa*	Sprout
287	Cocu, Koku *Allophyllus edulis*	Leaf, stem
288	Quinoa *Chenopodium quinoa Willd.*	Seed
289	King oyster mushroom *Pleurotus eryngii*	Fruit body
290	*Catathelasma ventricosum*	Fruit body
291	*Cynanchum wilfordii* Hemsley	Tuberous root (首烏, Cynanchi Wilfordii Radix)
292	Clary *Salvia sclarea*	Leaf
293	*Tamarindus indica*	Fruit
294	Thyme *Thymus vulgaris* L.	Leaf
295	Taheebo, Pau D'Arco *Tabebuia avellanedae/ T. impetiginosa*	Skin
296	*Salicornia herbacea* L.	Leaf, stem
297	Paradise nut, Sapucaia nut *Lecythis zabucajo Aublet*	Nut
298	*Papaver przemko, Papaver neuga*	Seed(only heat-treated)
299	*Cacalia ainsliaeflora*	Leaf
300	Cornflower, *Centaurea cyanus* L.	Petal
301	*Juglans regia*	Nut
302	Staw mushroom *Volvariella volvacea*	Fruit body
303	Linden, Tilia flower *Tilia* spp.	Flower, leaf
304	Calamansi	Fruit

	Citrus fruits microcarpa Bunge	
305	Dalandan *Citrus fruits nobilis Lour.*	Fruit
306	*Polygonum multiflorum Thunberg*	Tuberous root (何首烏, Polygoni Multifori Radix)
307	Nasturtium *Tropaeolum majus* L.	Leaf, flower, sprout
308	*Pholmis umbrosa* Turcz.	Leaf, root(韓續斷,Phlomidis Radix)
309	*Rosa rogosa* Thunberg	Fruit, leaf, petal, flower bud(Rosae Flos)
310	*Helianthus annuus* L.	Seed, leaf
311	Sweet violet *Viola odorata*	Leaf
312	*Elsholtzia ciliata Hylander.*	Sprout, leaf
313	Honey bush *Cyclopia intermedia*	Leaf
314	*Hovenia dulcis* Thunberg	Fruit, stem, leaf
315	*Schizonepeta tenuifolia var. japonica*	Flower stalk (荊芥,Schizonepetae Spica)
316	Fenugreek *Trigonella foenum-graecum*	Fruit, seed (胡蘆巴, Trigonellae Semen)
317	Bottle gourd, calabash, Yuugao, White-flowerd gourd *Lagenaria siceraria (Molina) Standl.*	Fruit
318	Hawthorn *Crataegus monogyna* Thunb.	Fruit, sprout, leaf, seed, flower
319	Safflower *Carthamus tinctorius*	Leaf
320	*Euonymus alatus (Thunb.)*	Leaf
321	*Scutellaria baicalensis Georgi*	Root(黃芩, Scutellariae Radix)
322	*Astragalus membranaceus Bunge*	Root(黃耆, Astragli Radix)
323	*Foeniculum vulgare* Miller	Leaf, stem, fruit(茴香,Foeniculi Fructus), seed
324	Black walnut *Juglans nigra* L.	Nut

325	*Siegesbeckia pubescens, S.glabrescens*	Leaf
326	White Truffles *Tuber magnatum*	Fruit body
327	White jelly fungi *Tremella fuciformis* Beck.	Fruit body
328	Hibiscus *Hibiscus sabdariffa*	Petal
329	Hyssop *Hyssopus officinalis* L.	Flower, leaf

2. Animal Derived Raw Materials

	English Name/ Latin Name/ Scientific Name	**Parts**
1	*Cervi Gentitale Mas*	Whole
2	*Myocastor coypus*	
3	*Oxya japonica* THUNBERG	
4	*Bombysis Corpus**	Whole
5	*Rana catesbeiana/R. es-culenta/R. tigrina/* *R. limnocharis/R.cancrivora/Pseudis paradoxa*	
6	*Bombyx mori*, Linne	
7	*Helix pomatia/Nesiohelix samarangae/* *Achatina fulia*(Bowdich) Achatinidae	
8	*Amyda sinensis*	
9	*Meles meles*	
10	*Macropus gigantteus*	Meat
11	*Struthio camelus*	Meat
12	Harp seal *Phoca groenlandica* (Except genitals)	-
13	*Rana catesbeiana*	Flesh
*Commodities marked with * shall meet the standards of The Korean Herbal Pharmacopoeia and The Korean Parmacopoeia*		

3. Others

	English Name/ Latin Name/ Scientific Name	Parts
1	*Paecilomyces japonica/ Paecilomyces tenuipes*	Whole
2	*Cordyceps militaris*	Whole
3	Trehalulose	-
4	Palatinose	-

[Annex 2] The List of Raw Materials for Limited Use

1. Plant Derived Raw Materials

	English Name/ Latin Name/ Scientific Name	Parts (Name of crude drug)	Usage Condition
1	*Viscum album* L. var. *coloratum* Ohwi	Leaf, stem, branch (곡寄生, Visci Herba)	
2	*Angelica tenuissima* Nakai/*Ligusticum sinense* Oliv. *Ligusticum jeholense* Nakai et Kitagawa	Root,rhizome (藁本, Angelicae Tenuissimae Radix)	
3	*Citrus aurantium* L.	Fruit(只殼, Aurantii Immaturus Fructus)	
4	*Chrysanthemum zawadskii Herbich var. latilobum(Maxim.) Kitamura*	Whole plant(九折草)	-
5	*Inula japonica Thunberg/Inula britannica*	Flower(旋覆花, Inulae Flos)	-
6	Juniperberry *Juniperus communis, Juniperus rigida*	Fruit	-
7	*Hepatica asiatica Nakai.*	Root	-
8	*Salvia miltiorrhiza BUNGE*	Root(丹參, Salviae Miltiorrhizae Radix)	-
9	*Commelina communis* L.	Whole plant	-
10	*Aralia cordata/Aralia continentalis Kitagawa*	Root(獨活, Araliae Continentalis Radix)	-
11	*Sorbus commixta*	Bark	-
12	Maca *Lepidium meyenii*	Root	-
13	*Codonopsis pilosula Nannfeldt.*	Root(黨蔘, Codonopsis Radix)	-
14	*Fomes fomentarius*	Fruit body	-
15	*Liriope platyphylla Wang et Tang.*	Root(麥門冬, Liriopis Tuber)	-
16	*Agastache rugosa O. Kuntze*	Above-aerial part(藿香, Agastachis Herba)	-

17	Willow *Salix koreensis*	Branch, skin of branch	-
18	Boswellia, Indian frankincense *Boswellia serrata*	Gum resin	-
19	*Poria cocos Wolf*	Sclerotium(茯苓, Hoelen)	-
20	*Curcuma zedoaria Roscoe*	Rhizome(莪朮, Zedoariae Rhizoma)	-
21	Red clover *Trifolium pratense*	Flower	-
22	*Eriobotrya japonica*	Leaf(枇把葉, Eriobotryae Folium)	-
23	*Torilis japonica Decandolle*	Fruit (蛇床子, Cnidi Fructus)	-
24	*Amomum xanthioides Wallich*	Seed(砂仁)	-
25	*Zizyphus vulgaris Lamarck/Zizyphus jujuba*	Seed(酸棗仁)	
26	*Saururus chinensis BAILL.*	Above-aerial part	
27	*Epimedium koreanum* Nakai	Above-aerial part	Shall only be used as a raw material of leached tea(infused tea)
28	*Atractylodes japonica Koidzumi*	Rhizome with periderm removed(白朮, Atractylodes rhizome white)	-
29	*Atractylodes lancea*	Rhizome(蒼朮, Atractylodis Rhizoma)	-
30	Hawthon berry *Crataegus oxycantha*	Fruit	-
31	*Acorus gramineus Soland.*	Rhizome(石菖蒲, Acori Gramineri Rhizoma)	-
32	*Achyranthes japonica Nakai*	Root(牛膝, Achyranthis Radix)	-
33	*Linum unsitatissimum*	Seed	Limited to heat treated seed for

			enzyme inactivation, etc. Daily intake shall not exceed 16 g and 1 serving size shall not exceed 4 g.
34	Yarrow *Achillea millefolium* L.	Leaf	-
35	*Houttuynia cordata THUNB.*	Whole plant(魚腥草, Houttuyniae Herba)	-
36	*Nelumbo nucifera GAERTNER*	Seed(蓮子肉, Nelumbinis Semen)	-
37	*Alnus japonica (Thunb.) Steudel*	Bark, leaf	-
38	*Zea mays* L.	Style(花柱 and 柱頭)	-
39	*Rhus verniciflua Stokes*	Stem, branch	Shall meet the usage standards specified in Rhus verniciflua Stokes in (18) of Article 2, 2, 1)
40	*Curcuma domestica/ Curcuma longa/ Curcuma aromatica*	Rhizome	-
41	*Polygala tenuifolia Willdenow*	Root(遠志, Polygalae Radix)	-
42	Ginko *Ginko biloba* L.	Leaf(銀杏葉, Ginkgo Folium)	Shall only be used as a raw material of leached tea(infused tea)
43	*Leonurus sibricus* L.	Above-aerial part(益母草, Leonuri Herba)	-
44	*Alpinia oxyphylla miquel*	Fruit(Alpinia oxyphylla Mlquel)	-
45	*Lonicera japonica Thunberg.*	Flower bud(金銀花), leaf and stem(忍冬)	-
46	Java(nese) turmeric, Tumulawak, Temu lawak *Curcuma xanthorriza* L.	Root	only for leached tea

47	Paeny Root *Paeonia albiflora* Pallas *var. trichocarpa* Bunge, Paeonia japonica var. pilosa NAKAI and other species of the same genus	Root(芍藥, Paeoniae Radix)	-
48	Paeoniae Radix Rubra *Paeonia obovata* Maximowicz, Paeonia albiflora var. hortensis Makino and other species of the same genus	Root	-
49	*Phllostachys nigra* Nunro var. *henosis* Stapf	Sap leaked out from burning node-stem	Shall only be used as a raw material of alcoholic beverages
50	Valerian Root *Valerian offcinails* L.	Root	-
51	*Rehmannia glutinosa Liboschitz*	Root(地黃, 生地黃(Rehmaniae Radix Crudus)), Root prepared by processing of herbal medicine(生熟地黃, Rehmanniae Radix et Rhizoma Preparata)	-
52	*Phellinus linteus/Phellinus baumii*	Fruit body	-
53	*Fuscoporia obliqua/ Inonotus obliquus*	Fruit body	-
54	*Cnidium officinale MAKINO.*	Rhizome(川芎, Cnidii Rhizona)	-
55	*Asparagus cochinchinensis*	Tuberous root(天門冬, Asparagi Tuber)	-
56	*Biota orientalis Endlicher*	Leaf(側栢葉, Biotae Folium)	-
57	*Gardenia jasminoides Ellis*	Fruit(梔子)	-
58	*Pueraria lobata* Ohwi	flower bud	-
59	*Aquilaria agallocha* Roxburgh	trunk deposited with resin(沈香, Aquilariae Lignum)	-
60	*Cuscuta chinensis Lamark*	Seed(Cruscutae Semen)	
61	Long pepper	Fruit(畢發, Piperis Longi	-

	Piper longum	Fructus)	
62	Sweet violet *Viola odorata*	Flower	-
63	*Textoria morbifera*	Leaf, stem, root	-
64	*Sophora japonica* Linne	Fruit(槐角, Sophorae Fructus)	-

2. Animal Derived Raw Materials

	English Name/ Latin Name/ Scientific Name	**Parts**	**Usage Condition**
1	* *Cervus nippon* T./ *Cervus elaphus* L./ *Cervus canadensis E.*	Ossified horn	-
2	* *Cervus nippon* T./ *Cervus elaphus* L./ *Cervus canadensis E.*	Young horn which became ossified slightly or not ossified at all	-
3	Big-belly Sea horse *Hippocampus abdominalis*		
4	*Cervus nippon* T./ *Cervus elaphus* L./ *Cervus canadensis E.*	Horn which became ossified slightly or not ossified at all	These horns shall not be subjected to drying process, with hair removed or washed at least three times with heated water, and then packaged, stored and distributed in frozen condition. Also, they shall only be used in processed extract products.
Commodities marked with * shall meet the standards of The Korean Herbal Pharmacopoeia and The Korean Parmacopoeia			

3. Others

	English Name/ Latin Name/ Scientific Name	**Parts**	**Usage Condition**
1	Lactulose	-	-

2	N-Acetylglucosamine		Can use 2 g or less per kg of product. However, its daily intake shall not exceed 1 g.
3	Plant sterol*		Can use 6.5 g or less per kg of product. However, its daily intake shall not exceed 3 g.
4	Plant sterol ester*		Can use 6.5 g or less per kg of product. However, its daily intake shall not exceed 3 g.
5	Plant sterol ester*		Can use 6.5 g or less per kg of product. However, its daily intake shall not exceed 3 g.
If more than two commodities marked with * are used together, their sum shall meet the usage condition.			

[Annex 3] The List of Raw Materials Not Usable in Foods

1. Plant Derived Raw Materials

	English Name/ Latin Name/ Scientific Name	Parts
1	Buckthorn *Rhamnus cathartica*	-
2	*Euphorbia kansui Liou ex Wang*	-
3	*Amanita subjunguillea Imai*	-
4	*Clematis serratifolia Rehder*	Leaf
5	Goldenseal *Hydrastis canadensis*	Root
6	*Juncus efusus var.* decipiens Buchenau	Stem
7	*Tussilago farfara*	Flower bud
8	*Dryopteris crassirhizoma*	Rhizome and residue of leaf
9	Grass pea *Lathyrus sativus*	Fruit
10	Black nightshade *Solanum nigrum* / *Solanum rubrum*	Fruit
11	Red-dye madder *Rubia akane Nakai*	Root
12	*Pharbitis nil* Choisy	Seed
13	*Nandina domestica* Thunb	Fruit, leaf
14	*Euphorbia fischeriana* Steudel	-
15	*Datura stramonium*, *Datura metel* or other closely related plants in the same genus	-
16	*Euphorbia pekinensis* Rupprecht	-
17	Hemp *Cannabis sativa*	Except seeds with shells completely removed
18	*Areca catechu*	Fruit skin
19	*Rheum palmatum/ R.coreanum/* *R. tanguticum/ R. officinale*	Rhizome
20	*Cocculus trilobus* DC.	-

21	*Prunus persica* or *Prunus persica* Franchet var. *davidiana* Maximowicz	Seed
22	*Amanita virosa (*Fr.*)* Bertillon	-
23	*Arisaema heterophyllum* Blume	-
24	*Pharbitis purpurea* Voigt	Seed
25	*Arisaema amurense* Maximowicz	-
26	*Corydalis ternata* Nakai	-
27	*Wisteria* spp.	-
28	*Garcinia hanburyi*	Resin
29	Digitalis *Digitalis purpurea*	-
30	*Cephaelis ipecacuanha (*Brot.*)* Rich.	Root
31	Ma dou ling *Aristolochia longa*	-
32	Vervain *Verbena officinalis* L.	Above-aerial part, flower
33	*Ephedra sinica* or plants in the same genus	-
34	*Rhodea japonica* Roth.	-
35	*Vitex rotundifolia*	Fruit
36	*Prunus mume*	Seed
37	*Claviceps purpurea* (Fr.) Tul.	Sclerotium
38	*Melia azedarach*	Fruit
39	*Paeonia suffruticosa/ P. moutan*	Root bark
40	*Akebia quinata* and or other closely related plants in the same genus	Stem
41	*Aucklandia lappa*	Root
42	*Muira puama*	-
43	*Scopolia japonica* Maxim	Root
44	*Pinellia ternata*	Tuber
45	*Sinomenium acutum*	Climbing stem and rhizome
46	*Saposhnikovia divaricata*	Root and rhizome
47	*Chelidonium majus*	-
48	*Amomum cardamomum*	Fruit
49	*Aconitum koreanum* Raymond	-
50	*Dictamnus dasycarpus* Turcz	-

51	Belladonna *Atropa belladonna*	-
52	*Psoralea corylifolia*	Seed
53	*Strychnos ignatii*	Seed
54	*Adonis amurensis* Regel et Radde	-
55	*Rhus chinensis(=R. javanica)*	-
56	*Illicium religiosum*	-
57	Black cohosh *Cimicifuga racemosa*	-
58	Mulberry /Mistletoe *Loranthus parasiticus* Merr.	Leaf, stem, branch
59	Devil's eye *Hyoscyamus niger*	-
60	Salacia *Salacia oblonga / Salacia reticulata*	-
61	Horse chestnut *Aesculus hippocastanum*	-
62	*Punica granatum* Curculiginis Rhizoma *Curculigo orchioides* Gaertn.	Skin, seed
63	Curculiginis Rhizoma *Curculigo orchioides* Gaertn.	Root, stem
64	*Asiasarum heterotropoides* F. *Maekawa var. Mandshuricum* F. *Maekawa or Asiasarum sieboldi* F. *Maekawa*	Root, rhizome
65	Senna *Casssia acutifolia* Delile / *Cassia angustifolia*	-
66	*Cycas revoluta* Thunb.	Seed
67	*Picrasma quassioides*	-
68	Euphorbia hyemale L.	Above-aerial part(木賊, Equiseti Herba), root, stem
69	Euphorbia lathyris L.	-
70	charcoal	-
71	Strophanthus	-

	Strophanthus kombe or other closely related plants in the same genus	
72	*Cimicifuga heracleifolia* or other closely related plants in the same genus	Rhizome
73	*Bupleurum falcatum* or its variety	Root
74	Wormwood *Artemisia absinthium*	-
75	Adonis *Adonis vernalis*	-
76	Arnica *Arnica montana*	-
77	*Sauropus androgynus*	-
78	*Viburnum awabuki*	-
79	AFA *Aphanizomenon flos-aquae*	-
80	*Amanita phalloides (*Fr.) Link	-
81	Opium Poppy *Papaver somniferum* L.	-
82	*Ligustrum lucidum, L. japonicum* or other species in the same genus	Fruit
83	*Aconitum carmichaeli* Deneaux	-
84	The insect gall formed on the leaf of *Rhus javanica* by the attack (stab) of *Melaphis chinensis*.	-
85	Yohimbe *Coryanthe yohimbe*	Skin
86	*Boswellia carterii*	Branch, trunk or resin
87	*Gentiana scabra* Bunge	Leaf
88	*Sophora tonkinensis* Gapnep.	Root and rhizome
89	*Boswellia carterii*	Resin
90	*Cistanche deserticola* or other closely related plants in the same genus	Flesh of stem
91	*Clematis mandshurica*	Root
92	*Convallaria keiskei* Miquel	-
93	*Rauwolfia serpentina Bentham* or other closely related plants in the same genus	-
94	*Phytolacca esculenta* Houttuyn	-
95	*Rheum coreanum* Nakai	-
96	*Ailanthus altissima*	-
97	Insect flower	-

	Chrysanthemum cinerariaefolium	
98	*Taxus cuspidate* Siebold & Zucc.	Except flesh
99	*Aristolochia contorta*	-
100	*Gentiana macrophylla*	Root
101	*Aconitum pseudolaeve* Nakai	Root
102	*Plantago asiatica*	Seed (except skin)
103	*Veratrum nigrum* L. ver. *ussuriense* Loes. fil.	-
104	Chaparral / Greasewood / Creosote buch / Hediondilla *Larrea tridentata / Larrea divaricata / Larrea mexicana*	-
105	Chervil *Anthriscus cerefolium*	Root
106	*Arisaema erubescens* Schott	-
107	*Aconitum ciliare* or other closely related plants in the same genus	Tuberous root
108	Chinese arborvitae *Thuja orientalis* L.	Seed, branch
109	Karroo thorn tree *Acacia karroo*	Skin, leaf
110	*Cephaelis acuminate* H. Karst.	Root
111	Kava-kava *Piper methysticum*	-
112	Cascara sagrada *Rhamnus purshiana / Frangula purshiana (DC.)J.G.Cooper.*	-
113	Carolina jasmine *Gelsemium sempervirens*	-
114	*Symphytum officinale/ S. asperum/ S. xuplandicum*	-
115	Coca *Erythroxylon coca*	Leaf
116	Curare / Grieswurzel / Pareira Brava *Chondrodendron tomentosum*	-
117	Quinine tree / Cinchona / red bark *Cinchona succirubra Pav. Ex Klotzsch*	Skin
118	*Alisma orientale* or other closely related plants in the same genus	Tuber
119	*Uragoga ipecacuanha* Baillon	-
120	*Croton tiglium*	Seed

121	White Kwao Krua *Pueraria mirifica* Airy shaw & Suvat.	-
122	*Ricinus communis*	-
123	Harmal, *Peganum harmala* L.	Fruit, seed
124	Jalapae *Ipomoea purga* Hayne	-
125	*Urginea scilla* Steinheil	-
126	*Prunus armeniaca Linn. var. ansu Maximowicz*), *Prunus mandshurica Koehne var. glabra Nakai*)or other closely related plants in the same genus	Seed
127	*Periploca sepium*	-
128	*Cyperus rotundus*	Rhizome
129	*Strychnos nux-vomica*	Seed
130	Jequirity *Abrus precatorius*	Seed
131	*Coptis japonica* and other species in the same genus	Rhizome
132	Amur cork tree *Phellodendron amurense* Rupr.	Skin(黃柏, Phellodendri Cortex)
133	White willow bark *Salix alba*	-
134	*Amanita verna* (Bull. ex Fr.) Pers. ex Vitt	-
135	Lilafee/ Horny goat / weed *Epimedium grandiflorum* C. Morren.	Leaf
136	Bala / Bariar *Sida cordifolia* L.	-
137	Guggula / Gugal / Guggle / Suddha guggul / Myrrh *Commiphora mukul* Engl.	Gum, resin (except branch)
138	Loa haole / Ekoa, Hediondilla / Zarcilla/ Tanta/ Jumbie bean *Leucaena leucocephala* (Lam.) deWit.	-
139	Dioscorea/ Mexican yam/ Colic root/ Rheumatism root *Dioscorea villosa* L.	-

2. Animal Derived Raw Materials

	English Name/ Latin Name/ Scientific Name	**Parts**
1	Oilfish / Escolar *Ruvettus pretiosus / Lepidocybium flavobrunneum*	Whole
2	*Geoclemys reevesii* Gray	Whole
3	-	-

4	-	-
5	BUFO *Bufo bufo gargarizans* Cantor or other allied species	Including secretion from poison gland(Bufonis Venenum)
6	Cantharides *Mylabris cichorii* L / *Mylabris phalerata* Pallas / *Epicauta gorhami* Marseul	-
7	-	-
8	Bee venom	-
9	-	-
10	-	-
11	-	-
12	-	-
13	Musk *Moschus berezovskii* / *Moschus chrysogaster* or *Moschus moschiferus*	Secretion from musk gland in males
14	-	-
15	-	-
16	*Gekko gecko*	-
17	*Callorhinus ursinus / Otaria ursinus*	-

3. Others

	English Name/ Latin Name/ Scientific Name	**Using Part**
1	Mushroom tea/ tisane / Kombucha	-
2	*Cordyceps sinensis*	-
3	-	-
4	*Paecilomyces sinclairii/ Isaria sinclairii*	Including host of silkworm
5	Silver / Ag	-
6	Loess / Yellow earth	-

Annex 4. Maximum Residue Limits for Pesticides in Agricultural Products

Commodity	ppm	Commodity	ppm	Commodity	ppm

(1) Iminoctadine

◎ Residue definition : Iminoctadine

Apple	0.3	Kiwifruit	0.3	Persimmon	0.3
Chieves	1.0	Korean Melon	0.3	Rice	0.05
Corn	0.05	Korean Plum	1.0	Strawberry	1.0
Cucumber	0.3	Mandarin	0.5	Sweet Pepper	1.0
Chinese Matrimony Vine (Dried)	5.0	Maximowiczia Chinensis(Dried)	1.0	Tea	1.0
Green & Red Pepper(Fresh)	1.0	Onion	0.05	Tomato	0.3
Garlic	0.5	Other Agricultural Products	0.05	Watermelon	0.05
Grape	0.5	Peach	0.2	Welsh Onion	1.0
Job' Tear	0.05	Pear	0.05		

(2) Glufosinate(ammonium)

◎ Residue definition : Glufosinate(ammonium)

Green & Red Pepper(Fresh)	0.05	Kiwifruit	0.05	Sesame Seed	0.05
Chestnut	0.1	Mandarin	0.1	Squash	0.05
Cotton Seed	3.0†	Pome Fruits	0.05	Stone Fruits	0.05
Grape	0.05	Potato	0.05	Tea	0.05
Green Soy Bean	0.05	Rubi Fructus	0.05	Yuja, *Citrus junos*	0.05

(3) Glyphosate

◎ Residue definition : Glyphosate

Chestnut	0.2	Mandarin	0.5	Pome Fruits	0.2
Grape	0.2	Peach	0.2	Rice	0.05
Green & Red Pepper(Fresh)	0.2				

(4) Napropamide

◎ Residue definition : Napropamide

Bonnet Bellflower	0.1	Korean Cabbage	0.1	Radish(Leaves)	0.05
Cabbage	0.1	Korean Cabbage, Head	0.1	Radish(Root)	0.05
Chwinamul	0.1	Mandarin	0.1	Sesame Seed	0.1
Garlic	0.1	Peanut	0.1	Soy Bean	0.05
Green & Red Pepper(Fresh)	0.1	Potato	0.1	Tomato	0.1
Green Soy Bean	0.05				

(5) Norflurazon

◎ Residue definition : Norflurazon

Apple	0.1	Other Agricultural Products	0.05	Peanut	0.05

(6) Nitrapyrin

◎ Residue definition : Nitrapyrin

Corn	0.1	Sorghum	0.1	Wheat	0.1
Cotton Seed	1.0	Strawberry	0.2		

(7) Daminozide

◎ Residue definition : Daminozide

Almond	N.D.	Korean Cabbage, Head	N.D.	Peanut	N.D.
Apple	N.D.	Melon	N.D.	Pear	N.D.
Cacao Bean	N.D.	Mushrooms	N.D.	Pecan	N.D.
Cherry	N.D.	Other Beans	N.D.	Potato	N.D.
Chestnut	N.D.	Other Cereal Grains	N.D.	Rice	N.D.
Coffee Bean	N.D.	Other Fruits	N.D.	Sesame Seed	N.D.
Gingko Nut	N.D.	Other Potatoes	N.D.	Soy Bean	N.D.
Grape	N.D.	Other Seeds	N.D.	Tomato	N.D.
Grapefruit	N.D.	Other Vegetables	N.D.	Walnut	N.D.
Hop	N.D.	Peach	N.D.		

(8) Diazinon

◎ Residue definition : Diazinon

Almond	0.1	Hop	0.1	Pecan	0.1
Apple	0.5	Kale	0.5	Persimmon	0.1
Apricot	0.5	Kiwifruit	0.2	Pineapple	0.1
Asparagus	0.5	Korean Cabbage	0.1	Plum	0.5
Avocado	0.5	Korean Cabbage, Head	0.1	Potato	0.1
Banana	0.1	Korean Cabbage,	0.3	Radish(Leaves)	0.1
Barley	0.1	Korean Melon	0.02	Radish(Root)	0.1
Bracken	0.5	Lemon	0.7	Rice	0.1
Buckwheat	0.1	Lettuce(Head)	0.1	Rye	0.1
Cabbage	0.1	Lettuce(Leaf)	0.1	Sorghum	0.1
Carrot	0.5	Mango	0.5	Soy Bean	0.1
Celery	0.5	Melon	0.1	Spinach	0.1
Cherry	0.1	Mushrooms	0.5	Squash	0.1
Coffee Bean	0.2	Oat	0.1	Strawberry	0.1
Corn	0.1	Onion	0.5	Sunflower Seed	0.1
Cotton Seed	0.1	Orange	0.7	Sweet Pepper	0.5

Crown Daisy	0.1	Other Beans	0.1	Sweet Potato	0.1
Cucumber	0.02	Other Cereal Grains	0.1	Tomato	0.3
Eggplant	0.1	Other Citrus Fruits	0.1	Walnut	0.1
Garlic	0.1	Papaya	0.5	Watermelon	0.1
Grape	0.1	Peach	0.7	Welsh Onion	0.1
Grapefruit	0.7	Peanut	0.1	Welsh Onion(Dried)	0.3
Green & Red Pepper(Dried)	3.0	Pear	0.1	Wheat	0.05
Green & Red Pepper(Fresh)	0.5				

(9) Deltamethrin

◎ Residue definition : Deltamethrin (Sum of deltamethrin alpha-R, trans-deltamethrin)

Artemisia	0.2	Korean Cabbage, Head	0.3	Pumpkin Young Leaves	1.0
Chestnut	0.05	Korean Plum	0.5	Rape(Seeds)	0.05
Chinese Matrimony Vine (Dried)	2.0	Mandarin	0.5	Sesame Seed	0.5
Corn	0.1	Other Agricultural Products	0.01	Sorghum	0.3
Cucumber	0.5	Peach	0.5	Soy Bean	0.1
Green & Red Pepper(Fresh)	0.2	Plum	0.5	Squash	0.05
Green Soy Bean	0.3	Pome Fruits	0.5	Sweet Pepper	0.5
Kiwifruit	0.05	Potato	0.01	Yuja, *Citrus junos*	0.5
Korean Cabbage	1.0				

(10) Dodine

◎ Residue definition : Dodine

Apple	5.0	Grape	5.0	Strawberry	5.0
Cherry	2.0	Pear	5.0		

(11) Meptyldinocap

◎ Residue definition : Meptyldinocap

Apple	0.1	Melon	0.1	Squash	0.1
Apricot	0.1	Other Agricultural Products	0.05	Strawberry	1.0
Cucumber	1.0	Peach	0.1	Watermelon	0.1
Grape	0.1	Pear	0.1		
Korean Melon	1.0	Persimmon	0.5		

(12) DDT : Sum of p,p'-DDT, o,p'-DDT, p,p'-DDD and p,p'-DDE

◎ Residue definition : Sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-TDE(DDD)

Carrot	0.2	Cereal Grains	0.1	Other Agricultural Product	0.05

(13) Dimethipin

◎ Residue definition : Dimethipin

Cotton Seed	0.5	Potato	0.05	Sunflower Seed	0.5

Other Seeds	0.2

(14) Dimethoate

◎ Residue definition : Dimethoate

Apple	1.0	Grape	1.0	Plum	0.5
Apricot	2.0	Green & Red Pepper(Fresh)	1.0	Potato	0.05
Banana	1.0	Hop	3.0	Radish(Leaves)	2.0
Cabbage	2.0	Kale	0.5	Radish(Root)	2.0
Carrot	1.0	Lettuce(Head)	2.0	Sorghum	0.1
Celery	1.0	Melon	1.0	Soy Bean	0.05
Cherry	2.0	Onion	0.2	Spinach	1.0
Citrus Fruits	2.0	Other Beans	2.0	Strawberry	1.0
Corn	0.1	Pea	0.5	Sweet Pepper	1.0
Cotton Seed	0.1	Peach	2.0	Tomato	1.0
Cucumber	2.0	Pear	1.0	Wheat	0.2
Garlic	1.0	Pecan	0.1		

(15) Disulfoton

◎ Residue definition : Sum of disulfoton, demeton-S and their sulphoxides and sulphones, expressed as disulfoton

Coffee Bean	0.2	Peanut	0.1	Pineapple	0.1
Other Agricultural Products	0.02				

(16) Diuron

◎ Residue definition : Diuron

Asparagus	2.0	Grape	1.0	Pineapple	1.0
Banana	0.1	Nuts	0.1	Potato	1.0
Barley	1.0	Oat	1.0	Rye	1.0
Citrus Fruits	1.0	Papaya	0.5	Sorghum	1.0
Corn	1.0	Pea	1.0	Wheat	1.0
Cotton Seed	1.0	Peach	0.1		

(17) Dimethyl dithiocarbamates

◎ Residue definition : Total dithiocarbamate

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357) Dithiocarb

(18) Dicamba

◎ Residue definition : Dicamba

Asparagus	3.0	Cotton Seed	3.0	Soy Bean	0.05
Barley	0.5	Oat	0.5	Wheat	1.5†
Corn	0.01†	Sorghum	3.0		

(19) Dicofol

◎ Residue definition : Dicofol

Almond	1.0	Grape	1.0	Papaya	1.0
Apple	2.0	Grapefruit	1.0	Peach	1.0
Apricot	1.0	Green & Red Pepper(Fresh)	1.0	Pear	2.0
Asparagus	1.0	Hop	1.0	Pecan	1.0
Avocado	1.0	Kale	1.0	Pineapple	1.0
Banana	1.0	Kiwifruit	1.0	Plum	0.5
Beans	0.1	Korean Cabbage, Head	1.0	Quince	1.0
Cabbage	1.0	Korean Melon	1.0	Radish(Leaves)	1.0
Carrot	1.0	Lemon	1.0	Spinach	1.0
Celery	1.0	Lettuce(Head)	1.0	Squash	1.0
Cherry	1.0	Mango	1.0	Strawberry	1.0
Chestnut	1.0	Melon	1.0	Sweet Pepper	1.0
Cotton Seed	0.1	Onion	1.0	Tomato	1.0
Cucumber	1.0	Orange	1.0	Walnut	1.0
Eggplant	1.0	Other Citrus Fruits	1.0	Welsh Onion	1.0
Garlic	1.0				

(20) Diquat

◎ Residue definition : Diquat(Diquat cation)

Barley	5.0	Other beans	0.5	Rice	0.02
Corn	0.1	Other Vegetables	0.05	Sorghum	2.0
Cotton Seed	1.0	Pea	0.1	Sunflower Seed	0.5
Onion	0.1	Potato	0.2	Wheat	2.0

(21) Dichlorvos : DDVP

◎ Residue definition : Dichlorvos

Almond	0.1	Korean Cabbage	0.5	Other Agricultural Product	0.05
Apple	2.0	Korean Cabbage, Head	0.2	Peach	0.05
Chestnut	0.5	Korean Plum	1.0	Perilla Leaves	2.0
Cucumber	1.0	Mandarin	0.1	Welsh Onion	0.5

(22) Dichlofluanid

◎ Residue definition : Dichlofluanid

Almond	15.0	Kale	15.0	Pea	0.2
Apple	5.0	Kidney Bean	0.2	Peach	5.0
Apricot	15.0	Kiwifruit	15.0	Peanut	0.2
Asparagus	15.0	Korean Cabbage, Head	15.0	Pear	5.0
Avocado	15.0	Korean Melon	15.0	Pecan	15.0
Banana	15.0	Korean Plum	15.0	Persimmon	15.0
Barley	0.1	Lemon	15.0	Pineapple	15.0
Broad Bean	0.2	Lettuce(Head)	10.0	Plum	15.0
Buckwheat	0.1	Lettuce(Leaf)	10.0	Potato	0.1
Cabbage	15.0	Mandarin	15.0	Quince	15.0
Carrot	15.0	Mango	15.0	Radish(Root)	15.0
Celery	15.0	Melon	15.0	Red Bean	0.2
Cherry	2.0	Millet	0.1	Rye	0.1
Chestnut	15.0	Mung Bean	0.2	Sesame Seed	15.0
Chieves	15.0	Oak Mushroom	15.0	Sorghum	0.1
Cotton Seed	15.0	Oat	0.1	Soy Bean	0.2
Crown Daisy	15.0	Onion	0.1	Spinach	15.0
Cucumber	5.0	Orange	15.0	Squash	15.0
Eggplant	1.0	Other Beans	0.2	Strawberry	10.0
Garlic	15.0	Other Citrus Fruits	15.0	Sunflower Seed	15.0
Ginger	15.0	Other Fruits	15.0	Sweet Pepper	2.0
Gingko Nut	15.0	Other Mushrooms	15.0	Tomato	2.0
Grape	15.0	Other Nuts	15.0	Walnut	15.0
Grapefruit	15.0	Other Seeds	15.0	Watermelon	15.0
Green & Red Pepper(Dried)	5.0	Other Vegetables	15.0	Welsh Onion	15.0
Green & Red Pepper(Fresh)	2.0	Papaya	15.0	Wheat	0.1
Hop	5.0				

(23) Dicloran

◎ Residue definition : Dicloran

Apricot	10.0	Kiwifruit	10.0	Potato	0.25
Carrot	10.0	Lettuce(Head)	10.0	Soy Bean	20.0
Celery	10.0	Onion	10.0	Strawberry	10.0
Cherry	10.0	Other Beans	20.0	Sweet Potato	10.0
Cotton Seed	0.1	Peach	10.0	Tomato	0.5
Grape	10.0	Plum	10.0		

(24) Dichlobenil

◎ Residue definition : Dichlobenil

Apple	0.15	Citrus Fruits	0.15	Peach	0.15
Apricot	0.15	Grape	0.15	Pear	0.15
Avocado	0.15	Mango	0.15	Plum	0.15
Cherry	0.15	Nuts	0.15		

(25) Diclofop-methyl

◎ Residue definition : Diclofop-methyl

Barley	0.1	Soybean	0.1	Wheat	0.1

(26) Difenoconazole

◎ Residue definition : Difenoconazole

Bonnet Bellflower	0.05	Jujube	2.0	Pumpkin Young Leaves	10
Burdock	1.0	Jujube (Dried)	7.0	Radish(Leaves)	5.0
Carrot	0.5	Korean Melon	0.3	Radish(Root)	0.2
Cherry	1.0	Korean Plum	1.0	Rice	0.2
Chinese Matrimony	7.0	Lemon	0.6†	Sesame Seed	0.1
Chwinamul	5.0	Mandarin	1.0	Squash	0.5
Crown Daisy	7.0	Melon	0.5	Strawberry	0.5
Cucumber	1.0	Onion	0.05	Sweet Pepper	1.0
Eggplant	0.5	Orange	0.5†	Tea	2.0
Garlic	0.5	Other Agricultural Products	0.05	Tomato	1.0
Grape(Wild Grapes)	1.0	Peach	0.5	Water Dropwort	3.0
Grapefruit	0.4†	Peanut	0.1	Watermelon	0.05
Green & Red Pepper(Fresh)	1.0	Perilla Leaves	7.0	Welsh Onion	1.0
Green Garlic	2.0	Plum	0.3	Yam*	0.1
Job' Tear	0.1	Pome Fruits	1.0		

(27) Diphenylamine

◎ Residue definition : Diphenylamine

Apple	5.0	Pear	5.0

(28) Diphenamid

◎ Residue definition : Diphenamid

Other Agricultural Products	0.05	Peanut	0.05

(29) Diflubenzuron

◎ Residue definition : Diflubenzuron

Corn	0.05	Mandarin	3.0	Pome Fruits	2.0
Cucumber	1.0	Mushroom	0.3	Strawberry	2.0
Green & Red Pepper(Fresh)	1.0	Other Agricultural Products	0.05	Sweet Pepper	1.0
Korean Cabbage	2.0	Oyster Mushroom	1.0	Watermelon	0.3
Korean Cabbage, Head	0.7	Peach	1.0	Welsh Onion	0.5
Korean Melon	1.0				

(30) Linuron

◎ Residue definition : Linuron

Asparagus	3.0	Garlic	1.0	Potato	1.0
Barley	0.2	Green Garlic	0.05	Rye	0.2
Carrot	1.0	Green Soy Bean	0.1	Sorghum	0.2
Celery	0.5	Job' Tear	0.05	Soy Bean	1.0
Corn	0.2	Oat	0.2	Wheat	0.2
Cotton Seed	0.2	Onion	1.0	Yam*	0.2

(31) Myclobutanil

◎ Residue definition : Myclobutanil

Apricot	1.5†	Grape	2.0	Perilla Leaves	20
Asparagus	1.0	Green & Red Pepper(Dried)	5.0	Pineapple	1.0
Avocado	1.0	Green & Red Pepper(Fresh)	1.0	Plum	0.5
Banana	2.0	Jujube	1.0	Pome Fruits	0.5
Barley	0.5	Jujube(Dried)	2.0	Quince	1.0
Bonnet Bellflower	0.1	Kiwifruit	1.0	Spinach	1.0
Carrot	1.0	Korean Cabbage, Head	1.0	Squash	1.0
Cherry	2.0†	Korean Melon	1.0	Strawberry	1.0
Chieves	1.0	Mango	1.0	Sweet Pepper	1.0
Chwinamul	2.0	Melon	1.0	Tomato	1.0
Crown Daisy	1.0	Onion	1.0	Watermelon	1.0
Cucumber	1.0	Onion(Dried)	1.0	Welsh Onion	1.0
Eggplant	1.0	Papaya	1.0	Welsh Onion(Dried)	2.0
Garlic	1.0	Peach	2.0†	Wheat	0.3

(32) Malathion

◎ Residue definition : Malathion

Almond	0.5	Kiwifruit	0.5	Potato	0.5
Apple	0.5	Korean Cabbage	0.5	Radish(Leaves)	0.5
Apricot	0.5	Korean Cabbage, Head	0.2	Raisin	0.5
Asparagus	0.5	Korean Melon	0.5	Red Bean	0.5
Avocado	0.5	Lettuce(Head)	2.0	Rice	0.3
Barley	2.0	Mango	0.5	Radish(Root)	0.5
Buckwheat	2.0	Melon	0.5	Rye	2.0
Cabbage	0.5	Mung Bean	0.5	Sorghum	2.0
Carrot	0.5	Mushrooms	0.5	Soy Bean	0.5
Celery	1.0	Oat	2.0	Spinach	0.5
Cherry	0.5	Onion	2.0	Squash	0.5
Chestnut	2.0	Other Beans	0.5	Strawberry	0.5
Corn	2.0	Other Cereal Grains	2.0	Sunflower Seed	2.0
Cotton Seed	2.0	Other Seeds	2.0	Sweet Pepper	0.5
Crown Daisy	0.2	Papaya	0.5	Sweet Potato	0.5
Cucumber	0.5	Pea	0.5	Taro	0.5
Eggplant	0.5	Peach	0.5	Tomato	0.5
Garlic	2.0	Peanut	0.5	Walnut	2.0
Gingko Nut	2.0	Pear	0.5	Watermelon	0.5
Grape	2.0	Pecan	2.0	Welsh Onion	2.0
Green & Red Pepper(Fresh)	0.5	Persimmon	0.5	Wheat	8.0
Hop	0.5	Pineapple	0.5	Wheat Flour	1.0
Kale	2.0	Plum	0.5		

(33) Maleic hydrazide

◎ Residue definition : Maleic hydrazide

Almond	40.0	Lettuce(Head)	25.0	Pear	40.0
Apple	40.0	Kale	25.0	Pecan	40.0
Apricot	40.0	Kiwifruit	40.0	Persimmon	40.0
Asparagus	25.0	Korean Cabbage, Head	25.0	Pineapple	40.0
Avocado	40.0	Korean Plum	40.0	Plum	40.0
Banana	40.0	Lemon	40.0	Potato	50.0
Cabbage	25.0	Lettuce(Leaf)	25.0	Quince	40.0
Carrot	25.0	Mandarin	40.0	Radish(Root)	25.0
Celery	25.0	Mango	40.0	Sesame Seed	40.0
Cherry	40.0	Melon	40.0	Spinach	25.0
Chestnut	40.0	Oak Mushroom	25.0	Squash	25.0

Chieves	25.0	Onion	15.0	Strawberry	40.0
Cotton Seed	40.0	Orange	40.0	Sunflower Seed	40.0
Crown Daisy	25.0	Other Citrus Fruits	40.0	Sweet Pepper	25.0
Cucumber	25.0	Other Fruits	40.0	Sweet Potato	35.0
Eggplant	25.0	Other Mushrooms	25.0	Taro	35.0
Garlic	50.0	Other Nuts	40.0	Tomato	25.0
Ginger	25.0	Other Seeds	40.0	Walnut	40.0
Gingko Nut	40.0	Other Vegetables	25.0	Watermelon	40.0
Grape	40.0	Papaya	40.0	Welsh Onion	25.0
Grapefruit	40.0	Peach	40.0		

(34) Mevinphos

◎ Residue definition : Mevinphos

Apple	0.5	Lettuce(Head)	0.5	Pea	0.1
Apricot	0.2	Kale	1.0	Peach	0.5
Cabbage	1.0	Lemon	0.2	Pear	0.2
Carrot	0.1	Melon	0.05	Potato	0.1
Cherry	1.0	Onion	0.1	Radish(Root)	0.1
Cucumber	0.2	Orange	0.2	Spinach	0.5
Grape	0.5	Other Beans	0.1	Strawberry	1.0
Grapefruit	0.2	Other Citrus Fruits	0.2	Tomato	0.2

(35) Methomyl

◎ Residue definition : Sum of Methomyl and thiodicarb, expressed as methomyl

Apple	2.0	Jujube/Jujube(Dried)	0.05	Pecan	0.1
Asparagus	0.5	Kale	5.0	Persimmon	3.0
Avocado	1.0	Korean Cabbage	3.0	Pineapple	0.2
Barley	0.5	Korean Cabbage, Head	1.0	Potato	0.1
Buckwheat	0.5	Korean Melon	0.2	Radish(Root)	0.2
Cabbage	0.5	Lemon	1.0	Rice	0.1
Carrot	0.2	Mandarin	0.7	Rye	0.5
Celery	0.5	Melon	0.2	Sorghum	0.2
Corn	0.05	Mushrooms	0.5	SoyBean	0.2
Cotton Seed	0.4	Oat	0.5	Spinach	0.5
Cucumber	0.2	Onion	0.2	Squash	0.2
Eggplant	0.2	Onion(Dried)	0.2	Sweet Pepper	5.0
Ginger	0.2	Orange	1.0	Sweet Potato	0.2
Grape	1.0	Other Beans	0.1	Tomato	0.2
Grapefruit	1.0	Other Citrus Fruits	1.0	Welsh Onion	2.0
Green & Red Pepper(Dried)	5.0	Pea	5.0	Welsh Onion(Dried)	0.4
Green & Red Pepper(Fresh)	5.0	Peach	5.0	Wheat	0.2
Lettuce(Head)	5.0	Peanut	0.1	Wild Grape	2.0
Hop	2.0	Pear	2.0		

(36) Methiocarb

◎ Residue definition : Methiocarb

Barley	0.05	Lemon	0.05	Other Citrus Fruits	0.05
Buckwheat	0.05	Lettuce(Leaf)	0.2	Peach	5.0
Cabbage	0.2	Lettuce(Head)	0.2	Rice	0.05
Cherry	5.0	Mandarin	0.5	Rye	0.05
Corn	0.05	Oat	0.05	Sorghum	0.05
Cucumber	0.3	Orange	0.05	Soy Bean	0.05
Grapefruit	0.05	Other Cereal Grains	0.05	Wheat	0.05

(37) Mecarbam

◎ Residue definition : Mecarbam

Citrus fruits	0.05	Other Agricultural Products	0.05

(38) Metalaxyl

◎ Residue definition : Metalaxyl

Apple	0.05	Garlic(Green Garlic)	0.05	Potato	0.05
Asparagus	0.05	Hop	10.0	Rice	0.05
Avocado	0.2	Korean Cabbage	0.5	Rye	0.05
Barley	0.05	Korean Cabbage, Head	0.2	Sesame Seed	0.1
Buckwheat	0.05	Korean Cabbage,	5.0	Sorghum	0.05
Cabbage	0.5	Korean Melon	1.0	Soy Bean	0.05
Carrot	0.05	Lettuce(Head)	2.0	Spinach	2.0
Chard	20	Lettuce(Leaf)	2.0	Squash	0.2
Corn	0.05	Melon	0.2	Strawberry	0.2
Cotton Seed	0.05	Millet	0.05	Sunflower Seed	0.05
Cucumber	1.0	Mustard Leaf	1.0	Sweet Pepper	1.0
Ginger	0.5	Oat	0.05	Tomato	0.5
Ginger(Dried)	2.0	Onion	0.2	Watermelon	0.2
Grape	1.0	Pea	0.05	Welsh Onion	0.5
Green & Red Pepper(Dried)	5.0	Peanut	0.1	Wheat	0.05
Green & Red Pepper(Fresh)	1.0				

(39) Methamidophos

◎ Residue definition : Methamidophos

Cabbage	1.0	Korean Cabbage, Head	1.0	Other Fruits	0.1
Celery	1.0	Lemon	0.5	Other Seeds	0.1
Cotton Seed	0.1	Lettuce(Head)	1.0	Peach	1.0
Cucumber	1.0	Lettuce(Leaf)	1.0	Potato	0.05
Eggplant	1.0	Mandarin	0.5	Rice	0.5
Grapefruit	0.5	Melon	0.5	Soy Bean	0.05
Green & Red Pepper(Fresh)	1.0	Orange	0.5	Sweet Pepper	2.0
Hop	5.0	Other Citrus Fruits	0.5	Tomato	2.0

(40) Metolachlor

◎ Residue definition : Metolachlor

Apricot	0.1	Green Soy Bean	0.05	Radish(Leaves)	0.1
Barley	0.1	Millet	0.1	Radish(Root)	0.1
Buckwheat	0.1	Nuts	0.1	Rice	0.1
Cabbage	1.0	Oat	0.1	Rye	0.1
Celery	0.1	Onion	1.0	Sorghum	0.3
Cherry	0.1	Other Beans	0.3	Soy Bean	0.2
Corn	0.1	Peach	0.1	Sweet Pepper	0.1
Cotton Seed	0.1	Peanut	0.5	Welsh Onion	0.1
Garlic	1.0	Plum	0.1	Wheat	0.1
Green & Red Pepper(Fresh)	0.5	Potato	0.2		

(41) Metobromuron

◎ Residue definition : Metobromuron

Beans	0.2	Potato	0.2		

(42) Methoprene

◎ Residue definition : sum of cis- and trans-isomers

Barley	5.0	Mushrooms	0.2	Rye	5.0
Buckwheat	5.0	Oat	5.0	Sorghum	5.0
Corn	5.0	Peanut	2.0	Wheat	5.0
Millet	5.0	Rice	5.0		

(43) Methoxychlor

◎ Residue definition : Methoxychlor

Apple	14.0	Kale	14.0	Radish(Root)	14.0
Apricot	14.0	Lettuce(Head)	14.0	Raisin	14.0
Asparagus	14.0	Melon	14.0	Rice	2.0
Barley	2.0	Mushrooms	14.0	Rye	2.0
Beans	14.0	Oat	2.0	Sorghum	2.0
Cabbage	14.0	Peach	14.0	Spinach	14.0
Carrot	14.0	Peanut	14.0	Squash	14.0
Cherry	14.0	Pear	14.0	Strawberry	14.0
Corn	2.0	Pineapple	14.0	Sweet Pepper	14.0
Cucumber	14.0	Plum	14.0	Sweet Potato	7.0
Eggplant	14.0	Potato	1.0	Tomato	14.0
Grape	14.0	Quince	14.0	Wheat	2.0
Green & Red Pepper(Fresh)	14.0	Radish(Leaves)	14.0		

(44) Metribuzin

◎ Residue definition : Metribuzin

Asparagus	0.5	Korean Cabbage, Head	0.5	Rice	0.05
Barley	0.75	Lettuce(Leaf)	0.5	Rye	0.05
Buckwheat	0.05	Lettuce(Head)	0.5	Sorghum	0.05
Cabbage	0.5	Millet	0.05	Soy Bean	0.1
Carrot	0.5	Oak Mushroom	0.5	Spinach	0.5
Celery	0.5	Oat	0.05	Squash	0.5
Chieves	0.5	Onion	0.5	Sweet Pepper	0.5
Corn	0.05	Other Beans	0.05	Sweet Potato	0.5
Crown Daisy	0.5	Other Mushrooms	0.5	Taro	0.5
Cucumber	0.5	Other Vegetables	0.5	Tomato	0.5
Eggplant	0.5	Pea	0.05	Welsh Onion	0.5
Garlic	0.5	Potato	0.6	Wheat	0.75
Ginger	0.5	Radish(Leaves)	0.5		
Kale	0.5	Radish(Root)	0.5		

(45) Methidathion

◎ Residue definition : Methidathion

Almond	0.05	Eggplant	0.1	Pear	0.3
Apple	0.3	Grape	0.2	Plum	0.2
Apricot	0.2	Hop	3.0	Potato	0.02
Asparagus	0.2	Lettuce(Head)	0.2	Radish(Leaves)	0.2
Cabbage	0.2	Mandarin	5.0	Sorghum	0.1
Celery	0.2	Mango	0.05	Spinach	0.2
Cherry	0.2	Mushrooms	0.2	Squash	0.2
Corn	0.1	Other Citrus Fruits	2.0	Tea**	0.2
Cotton Seed	0.2	Pea	0.1	Tomato	0.1
Cucumber	0.05	Peach	0.2		

(46) Methylbromide

◎ Residue definition : Methyl bromide (as bromide ion)

Assorted Tropical and	20	Dried Fruits	30	Other Agricultural Product	20
Beans	50	Dried Vegetables	30	Potatoes	30
Cereal Grains	50	Nuts	50	Vegetables	30
Citrus Fruits	30				

(47) Monocrotophos

◎ Residue definition : Monocrotophos

Apple	1.0	Hop	1.0	Pea	0.1
Cabbage	0.2	Lemon	0.2	Pear	1.0
Carrot	0.05	Onion	0.1	Potato	0.05
Coffee Bean	0.1	Orange	0.2	Soy Bean	0.05
Corn	0.05	Other beans	0.2	Tomato	1.0
Cotton Seed	0.1	Other Citrus Fruits	0.2	Watermelon	0.1
Grapefruit	0.2				

(48) Vamidothion

◎ Residue definition : Vamidothion

Other Agricultural Products	0.05	Rice	0.05

(49) Bioresmethrin

◎ Residue definition : Bioresmethrin

Wheat	1.0

(50) Benalaxyl

◎ Residue definition : Benalaxyl

Cucumber	0.3	Korean Cabbage, Head	0.1	Sesame Seed	0.05
Ginger	0.05	Korean Melon	1.0	Sweet Pepper	0.05
Green & Red	1.0	Other Agricultural Products	0.05	Tomato	2.0
Korean Cabbage	3.0	Potato	0.05		

(51) Benomyl

◎ Residue definition : Benomyl (Sum of benomyl, carbendazim and thiophanate-methyl, expressed as Carbendazim)

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (112) Carbendaz

(52) Bendiocarb

◎ Residue definition : Bendiocarb

Other Agricultural Products	0.02	Rice	0.02

(53) Bensulfuron methyl

◎ Residue definition : Bensulfuron-methyl

Rice	0.02

(54) Bentazone

◎ Residue definition : Bentazone

Asparagus	0.2	Kale	0.2	Peanut	0.05
Barley	0.1	Kidney Bean	0.2	Radish(Leaves)	0.2
Broad Bean	0.05	Korean Cabbage, Head	0.2	Radish(Root)	0.2
Buckwheat	0.2	Lettuce(Leaf)	0.2	Red Bean	0.2
Cabbage	0.2	Lettuce(Head)	0.2	Rice	0.05
Carrot	0.2	Millet	0.2	Rye	0.1
Celery	0.2	Mung Bean	0.2	Sorghum	0.1
Chieves	0.2	Oak Mushroom	0.2	Soy Bean	0.05
Corn	0.2	Oat	0.1	Spinach	0.2
Crown Daisy	0.2	Onion	0.1	Squash	0.2
Cucumber	0.2	Other Beans	0.2	Sweet Pepper	0.2
Eggplant	0.2	Other Mushrooms	0.2	Tomato	0.2
Garlic	0.2	Other Vegetables	0.2	Welsh Onion	0.2
Ginger	0.2	Pea	0.05	Wheat	0.1

(55) Buprofezin

◎ Residue definition : Buprofezin

Apple	0.5	Korean Plum	1.0	Pepper Leaves	5.0
Cherry	1.0	Mandarin	0.5	Persimmon	0.5
Cucumber	1.0	Maximowiczia Chinensis (Dried)	3.0	Pumpkin Young Leaves	7.0
Eggplant	0.3	Melon	0.7	Rice	0.5
Fig	1.0	Mulberry	1.0	Squash	0.5
Grape	2.0	Mulberry Leaves	5.0	Sweet Pepper	1.0
Green & RedPepper(Fresh)	3.0	Other Agricultural Products	0.05	Tea	1.0
Green Tea Extract	2.0	Peach	1.0	Tomato	1.0
Kiwifruit	1.0	Pear	0.5	Watermelon	0.05
Korean Melon	1.0				

(56) Bromacil

◎ Residue definition : Bromacil

Citrus fruits	0.1	Pineapple	0.1

(57) Bromopropylate

◎ Residue definition : Bromopropylate

Apple	5.0	Hop	5.0	Other Vegetables	1.0
Banana	5.0	Lemon	5.0	Peach	5.0
Cherry	5.0	Melon	0.5	Pear	5.0
Cotton Seed	1.0	Orange	5.0	Plum	5.0
Grape	5.0	Other Citrus Fruits	5.0	Strawberry	5.0
Grapefruit	5.0				

(58) BHC : Sum of α, β, γ and δ- BHC

◎ Residue definition : Sum of α, β and δ-BHC

Cereal Grains	0.02	Peanut or Nuts	0.01	Vegetables	0.01
Fruits	0.01	Potatoes	0.01	Beans	0.01
Other Agricultural Products	0.01	Oil Seed	0.02		

(59) Bitertanol

◎ Residue definition : Bitertanol

Apple	0.6	Green Tea Extract	25.0	Pepper Leaves	3.0
Apricot	1.0	Kidney Bean	0.2	Persimmon	0.3
Banana	0.5	Korean Melon	0.2	Plum	1.0
Barley	0.05	Korean Plum	2.0	Quince	0.6
Bracken	0.02	Melon	0.2	Red Bean	0.2
Broad Bean	0.2	Millet	0.1	Rye	0.1
Buckwheat	0.1	Mung Bean	0.2	Sorghum	0.1
Burdock	2.0	Oat	0.1	Soy Bean	0.2
Cherry	2.0	Other Beans	0.2	Squash	0.5
Corn	0.05	Pea	0.2	Strawberry	1.0
Cucumber	0.5	Peach	1.0	Tea	10.0
Eggplant	0.5	Peanut	0.1	Watermelon	0.5
Green & Red Pepper(Fresh)	0.7	Pear	0.6	Wheat	0.1

(60) Bifenox

◎ Residue definition : Bifenox

Barley	0.05	Rice	0.05	Soy Bean	0.05
Corn	0.05	Sorghum	0.05	Wheat	0.05
Oat	0.05				

(61) Bifenthrin

◎ Residue definition : Bifenthrin

Blueberry	0.3	Jujube(Dried)	2.0	Potato	0.05
Bonnet Bellflower	0.05	Kiwifruit	0.05	Radish(Leaves)	0.05
Broccoli	1.0	Korean Cabbage	2.0	Radish(Root)	0.05
Butterbur	1.0	Korean Cabbage, Head	0.7	Red Bean	0.05
Chard	1.0	Korean Melon	0.1	Sorghum	0.5
Chestnut	0.05	Korean Plum	1.0	Soy Bean	0.5
Chieves	0.5	Lettuce(Leaf)	3.0	Spinach	2.0
Chwinamul	3.0	Mandarin	0.5	Squash	0.2
Cucumber	0.5	Marsh Mallow	1.0	Sweet Pepper	1.0
Eggplant	0.3	Maximowiczia Chinensis	0.05	Sweet Potato	0.05
Garlic	0.05	Melon	0.05	Sweet Potato Vines	0.05
Grape	0.5	Mustard Leaf	1.0	Tea	3.0
Green & Red Pepper(Dried)	3.0	Other Agricultural Products	0.05	Tomato	0.5

Green & Red Pepper(Fresh)	1.0	Peach	0.3	Watermelon	0.05
Green Garlic	0.05	Perilla Leaves	10	Welsh Onion	0.1
Green Soy Bean	0.5	Plum	0.1	Yam	0.05
Green Tea Extract	0.7	Pome Fruits	0.5	Yam(Dried)	0.05
Jujube	0.5				

(62) Vinclozoline

◎ Residue definition : Vinclozolin

Apple	1.0	Hop	40.0	Pear	1.0
Apricot	5.0	Kiwifruit	10.0	Plum	10.0
Cabbage	1.0	Korean Melon	1.0	Potato	0.1
Cherry	5.0	Lettuce(Head)	2.0	Quince	1.0
Cucumber	1.0	Melon	1.0	Strawberry	10.0
Grape	5.0	Onion	1.0	Sweet Pepper	3.0
Green & Red Pepper(Fresh)	3.0	Peach	5.0	Tomato	3.0

(63) Sethoxydim

◎ Residue definition : Sethoxydim

Almond	1.0	Kidney Bean	20.0	Peach	1.0
Apple	1.0	Kiwifruit	1.0	Peanut	25.0
Apricot	1.0	Korean Cabbage	10	Pear	1.0
Asparagus	10.0	Korean Cabbage, Head	3.0	Pecan	1.0
Avocado	1.0	Korean Melon	2.0	Persimmon	1.0
Banana	1.0	Korean Plum	1.0	Pineapple	1.0
Broad Bean	10.0	Lemon	1.0	Plum	1.0
Cabbage	10.0	Lettuce(Leaf)	10.0	Potato	4.0
Carrot	10.0	Lettuce(Head)	10.0	Quince	1.0
Celery	10.0	Mandarin	1.0	Radish(Leaves)	10.0
Cherry	1.0	Mango	1.0	Radish(Root)	10.0
Chestnut	1.0	Melon	2.0	Red Bean	20.0
Chieves	10.0	Mung Bean	20.0	Sesame Seed	1.0
Corn	0.2	Oak Mushroom	10.0	Soy Bean	10.0
Cotton Seed	5.0	Onion	10.0	Spinach	10.0
Crown Daisy	10.0	Orange	1.0	Squash	10.0
Cucumber	10.0	Other Beans	30.0	Strawberry	10.0
Eggplant	10.0	Other Citrus Fruits	1.0	Sunflower Seed	7.0
Garlic	10.0	Other Fruits	1.0	Sweet Pepper	10.0
Ginger	10.0	Other Mushrooms	10.0	Sweet Potato	4.0
Gingko Nut	1.0	Other Nuts	1.0	Taro	1.0
Grape	1.0	Other Seeds	1.0	Tomato	10.0
Grapefruit	1.0	Other Vegetables	10.0	Walnut	1.0
Green & Red Pepper(Fresh)	4.0	Papaya	1.0	Watermelon	2.0

Kale	10.0	Pea	40.0	Welsh Onion	10.0

(64) Simazine

◎ Residue definition : Simazine

Almond	0.25	Corn	0.25	Pear	0.25
Apple	0.25	Grape	0.25	Pecan	0.1
Asparagus	10.0	Grapefruit	0.25	Plum	0.25
Avocado	0.25	Lemon	0.25	Raisin	0.25
Banana	0.2	Orange	0.25	Strawberry	0.25
Cherry	0.25	Peach	0.25	Walnut	0.2

(65) Cyromazine

◎ Residue definition : Cyromazine

Korean Melon	0.5	Oyster Mushroom	5.0	Watermelon	0.3
Other Agricultural Products	0.05				

(66) Cypermethrin

◎ Residue definition : Cypermethrin (Sum of isomers)

Almond	2.0	Green & Red Pepper(Dried)	2.0	Pecan	2.0
Apple	2.0	Green & Red Pepper(Fresh)	0.5	Pepper Leaves	2.0
Apricot	2.0	Kale	1.0	Perilla Leaves	5.0
Asparagus	5.0	Kiwifruit	2.0	Persimmon	2.0
Avocado	2.0	Korean Cabbage	5.0	Pineapple	2.0
Banana	2.0	Korean Cabbage, Head	2.0	Plum	1.0
Barley	0.5	Korean Plum	2.0	Potato	0.05
Buckwheat	1.0	Lemon	2.0	Quince	2.0
Cabbage	1.0	Lettuce(Leaf)	2.0	Radish(Leaves)	5.0
Carrot	0.05	Lettuce(Head)	2.0	Radish(Root))	0.05
Celery	5.0	Mandarin	2.0	Rice	1.0
Chamnamul	3.0	Mango	2.0	Rye	1.0
Cherry	1.0	Melon	2.0	Sesame Seed	0.2
Chestnut	2.0	Millet	1.0	Sorghum	1.0
Chicory(Endive)	5.0	Oak Mushroom	5.0	Soy Bean	0.05
Chieves	0.5	Oat	1.0	Spinach	2.0
Chinese Matrimony Vine (Dried)	5.0	Onion	0.1	Squash	5.0
Chwinamul	5.0	Orange	2.0	Strawberry	0.5
Coffee Bean	0.05	Other Beans	0.05	Sunflower Seed	0.2
Corn	0.05	Other Citrus Fruits	2.0	Sweet Pepper	0.5

Cotton Seed	0.2	Other Fruits	2.0	Sweet Potato	0.05
Crown Daisy	5.0	Other Mushrooms	0.05	Taro	0.05
Cucumber	0.2	Other Nuts	2.0	Tomato	0.5
Eggplant	0.2	Other Seeds	0.2	Walnut	2.0
Garlic	5.0	Other Vegetables	5.0	Watermelon	2.0
Ginger	5.0	Papaya	2.0	Welsh Onion	5.0
Gingko Nut	2.0	Peach	2.0	Welsh Onion(Dried)	20.0
Grape	0.5	Peanut	0.05	Wheat	0.2
Grapefruit	2.0	Pear	2.0		

(67) Cyfluthrin

◎ Residue definition : Cyfluthrin (Sum of isomers)

Apple	0.5	Korean Cabbage, Head	2.0	Persimmon	1.0
Apricot	1.0	Korean Plum	1.0	Plum	1.0
Asparagus	2.0	Lemon	2.0	Potato	0.1
Barley	2.0	Lettuce(Head)	2.0	Quince	1.0
Broad Bean	0.5	Lettuce(Leaf)	2.0	Radish(Leaves)	2.0
Buckwheat	2.0	Mandarin	0.5	Radish(Root)	0.5
Cabbage	2.0	Melon	2.0	Red Bean	0.5
Cherry	1.0	Millet	2.0	Rye	2.0
Chieves	2.0	Mung Bean	0.5	Sesame Seed	0.5
Corn	0.01	Oat	2.0	Sorghum	2.0
Cotton Seed	0.05	Onion	2.0	Soy Bean	0.5
Cucumber	2.0	Orange	2.0	Spinach	0.1
Eggplant	2.0	Other Beans	0.5	Squash	2.0
Garlic	2.0	Other Citrus Fruits	2.0	Sweet Pepper	0.5
Grape	1.0	Other Fruits	1.0	Sweet Potato	0.1
Grapefruit	2.0	Other Vegetables	2.0	Taro	0.1
Green&Red Pepper(Fresh)	1.0	Pea	0.5	Tomato	0.5
Kale	2.0	Peach	1.0	Watermelon	2.0
Kidney Bean	0.5	Peanut	0.5	Welsh Onion	2.0
Korean Cabbage	2.0	Pear	1.0	Wheat	2.0

(68) Cyhalothrin

◎ Residue definition : Cyhalothrin (Sum of isomers)

Almond	0.5	Job' Tear	0.05	Pear	0.2
Apple	0.2	Kale	0.5	Pecan	0.5
Apricot	0.5	Kidney Bean	0.2	Perilla Leaves	3.0
Asparagus	0.5	Kiwifruit	0.5	Persimmon	0.5
Avocado	0.5	Korean Cabbage	0.5	Pineapple	0.5
Banana	0.5	Korean Cabbage, Head	0.2	Plum	0.5
Barley	0.2	Korean Plum	0.5	Pomegranate	0.2
Blueberry	0.1	Lemon	1.0	Potato	0.02
Broad Bean	0.2	Lettuce(Head)	2.0	Quince	0.2
Buckwheat	0.2	Lettuce(Leaf)	2.0	Radish(Leaves)	1.0
Cabbage	0.2	Mandarin	0.5	Radish(Root)	0.5
Carrot	0.5	Mango	0.5	Red Bean	0.2
Celery	0.5	Melon	0.5	Rye	0.2
Cherry	0.5	Millet	0.2	Sesame Seed	0.5
Chestnut	0.5	Mung Bean	0.2	Sorghum	0.2
Chieves	2.0	Oak Mushroom	0.5	Soy Bean	0.2
Chinese Matrimony	2.0	Oat	0.2	Spinach	0.5
Coffee Bean	0.05	Onion	0.5	Squash	0.5
Corn	0.05	Orange	1.0	Strawberry	0.5
Cotton Seed	0.02	Other Beans	0.2	Sunflower Seed	0.5
Crown Daisy	0.5	Other Citrus Fruits	1.0	Sweet Pepper	1.0
Cucumber	0.5	Other Fruits	0.5	Sweet Potato	0.05
Eggplant	0.5	Other Mushrooms	0.5	Taro	0.05
Garlic	0.5	Other Nuts	0.5	Tea**	2.0
Ginger	0.5	Other Seeds	0.5	Tomato	0.5
Gingko Nut	0.5	Other Vegetables	0.5	Walnut	0.5
Grape	1.0	Papaya	0.5	Watermelon	0.5
Grapefruit	1.0	Pea	0.2	Welsh Onion	2.0
Green & Red Pepper(Dried)	2.0	Peach	0.5	Wheat	0.05
Green & Red Pepper(Fresh)	0.5	Peanut	0.2		

(69) Cyhexatin

◎ Residue definition : Sum of azocyclotin and cyhexatin, expressed as cyhexatin

Apple	2.0	Grapefruit	2.0	Peach	2.0
Beans	0.2	Lemon	2.0	Pear	2.0
Chinese Matrimony Vine	2.0	Mandarin	1.0	Plum	2.0
Chinese Matrimony Vine (Dried)	4.0	Melon	0.5	Strawberry	0.5
Cucumber	0.5	Orange	2.0	Sweet Pepper	0.5
Eggplant	0.1	Other Citrus Fruits	2.0	Tomato	2.0
Grape	0.2				

(70) Anilazin

◎ Residue definition : Anilazine

Barley	0.2	Wheat	0.1		

(71) Amitraz

◎ Residue definition : Amitraz

Cucumber	0.5	Maximowiczia Chinensis (Dried)	2.0	Pome Fruits	0.5
Eggplant	0.5	Mulberry	0.3	Sweet Pepper	1.0
Green & Red Pepper(Fresh)	1.0	Other Agricultural Products	0.05	Tea**	10.0
Kiwifruit	1.0	Peach	0.5	Tomato	1.0
Mandarin	0.2				

(72) Acetochlor

◎ Residue definition : Acetochlor

Corn	0.05†	Soy Bean	0.03†	Wheat	0.02†
Sorghum	0.05†				

(73) Acephate

◎ Residue definition : Acephate

Apple	5.0	Kidney Bean	3.0	Other Vegetables	3.0
Cabbage	5.0	Korean Cabbage	5.0	Peanut	0.2
Celery	10.0	Korean Cabbage, Head	2.0	Persimmon	2.0
Chieves	0.1	Lemon	5.0	Potato	0.5
Corn	0.5	Lettuce(Head)	5.0	Radish(Leaves)	10.0

Cotton Seed	2.0	Lettuce(Leaf)	5.0	Radish(Root)	1.0
Cucumber	5.0	Mandarin	5.0	Red Bean	3.0
Eggplant	5.0	Mung Bean	3.0	Rice	0.3
Garlic	2.0	Nuts	0.1	Soy Bean	0.5
Ginger	0.1	Onion	0.5	Sweet Pepper	5.0
Grape	5.0	Orange	5.0	Tomato	5.0
Grapefruit	5.0	Other Citrus Fruits	5.0	Watermelon	0.5
Green & Red Pepper(Fresh)	4.0	Other Fruits	1.0	Welsh Onion	0.1
Kale	5.0				

(74) Azocyclotin

◎ Residue definition : Sum of azocyclotin and cyhexatin, expressed as cyhexatin

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (69) Cyhexatin.

(75) Azinphos-methyl

◎ Residue definition : Azinphos-methyl

Almond	0.2	Green & Red Pepper(Fresh)	0.3	Plum	1.0
Apple	1.0	Kale	0.3	Potato	0.2
Apricot	1.0	Kiwifruit	1.0	Quince	1.0
Asparagus	0.3	Korean Cabbage, Head	0.2	Radish(Leaves)	0.5
Avocado	1.0	Korean Melon	0.3	Radish(Root)	0.5
Banana	1.0	Lemon	1.0	Radish(Root)(Dried)	1.0
Barley	0.2	Mandarin	2.0	Rice	0.1
Buckwheat	0.2	Mango	1.0	Rye	0.2
Cabbage	0.5	Melon	0.3	Sorghum	0.2
Carrot	0.5	Oat	0.2	Soy Bean	0.2
Carrot(Dried)	3.0	Onion	0.3	Spinach	0.5
Celery	0.5	Onion(Dried)	0.5	Squash	0.5
Cherry	1.0	Orange	1.0	Strawberry	0.3
Corn	0.2	Other Beans	0.2	Sunflower Seed	0.2
Cotton Seed	0.2	Other Cereal Grains	0.2	Sweet Potato	0.2
Cucumber	0.3	Other Citrus Fruits	1.0	Tomato	0.3
Eggplant	0.3	Papaya	1.0	Walnut	0.3
Garlic	0.3	Peach	1.0	Watermelon	0.2
Grape	1.0	Pear	1.0	Welsh Onion	0.5
Grapefruit	1.0	Pecan	0.3	Welsh Onion(Dried)	0.7
Green & Red Pepper(Dried)	1.0	Pineapple	1.0	Wheat	0.2

(76) Aldrin & Dieldrin

◎ Residue definition : Sum of altrin and dieldrin

Cereal Grains	0.02	Other Agricultural Products	0.01	Root and Tuber	0.1
Citrus Fruits	0.05	Pome Fruits	0.05		

(77) Aldicarb

◎ Residue definition : Aldicarb

Barley	0.02	Other Agricultural Products	0.02	Soy Bean	0.02
Corn	0.05	Rice	0.02		

(78) Alachlor

◎ Residue definition : Alachlor

Potato	0.2	Strawberry	0.05	Onion	0.2
Sweet Potato	0.2	Peanut	0.05	Corn	0.2
Green & Red Pepper(Fresh)	0.2	Radish(Root)	0.2	Sesame Seed	0.2
Other Beans	0.1	Radish(Leaves)	0.2	Green Soy Bean	0.05
Soy Bean	0.2				

(79) Aluminium Phosphide(Hydrogen phosphide)

◎ Residue definition : Phosphine

Almond	0.01	Millet	0.1	Rice	0.1
Barley	0.1	Mung Bean	0.01	Rye	0.1
Buckwheat	0.1	Oat	0.1	Seeds	0.1
Corn	0.1	Other Beans	0.01	Sorghum	0.1
Dried Other Plants	0.01	Peanut	0.01	Soy Bean	0.1
Dried Vegetables	0.01	Pecan	0.01	Walnut	0.01
Kidney Bean	0.01	Red Bean	0.01	Wheat	0.1

(80) Edifenphos

◎ Residue definition : Edifenphos

Rice	0.2

(81) Ethephon

◎ Residue definition : Ethephon

Apple	5.0	Lemon	2.0	Pineapple	1.0
Barley	2.0	Mandarin	0.5	Squash	0.1
Coffee Bean	0.1	Pear	5.0	Tomato	3.0
Cotton Seed	2.0	Pecan	0.5	Walnut	0.5
Cucumber	0.1	Persimmon	5.0	Wheat	2.0
Grape	2.0				

(82) Ethiofencarb

◎ Residue definition : Ethiofencarb

Almond	5.0	Kiwifruit	5.0	Peanut	1.0
Apple	5.0	Korean Cabbage, Head	5.0	Pear	5.0
Apricot	5.0	Korean Melon	5.0	Pecan	5.0
Asparagus	2.0	Korean Plum	5.0	Persimmon	5.0
Avocado	5.0	Lemon	5.0	Pineapple	5.0
Banana	5.0	Lettuce(Head)	10.0	Plum	5.0
Barley	0.05	Lettuce(Leaf)	10.0	Potato	0.5
Broad Bean	1.0	Mandarin	5.0	Quince	5.0
Buckwheat	1.0	Mango	5.0	Radish(Leaves)	5.0
Cabbage	2.0	Melon	5.0	Radish(Root)	0.5
Carrot	5.0	Millet	1.0	Red Bean	1.0
Celery	2.0	Mung Bean	1.0	Rye	0.05
Cherry	10.0	Oak Mushroom	5.0	Sesame Seed	5.0
Chestnut	5.0	Oat	0.05	Sorghum	1.0
Chieves	5.0	Onion	5.0	Soy Bean	1.0
Corn	1.0	Orange	5.0	Spinach	5.0
Cotton Seed	5.0	Other Beans	1.0	Squash	5.0
Crown Daisy	5.0	Other Citrus Fruits	5.0	Strawberry	5.0
Cucumber	1.0	Other Fruits	5.0	Sunflower Seed	5.0
Eggplant	2.0	Other Mushrooms	5.0	Sweet Pepper	5.0
Garlic	5.0	Other Nuts	5.0	Sweet Potato	1.0
Ginger	5.0	Other Potatoes	1.0	Taro	1.0
Gingko Nut	5.0	Other Seeds	5.0	Tomato	5.0
Grape	5.0	Other Vegetables	5.0	Walnut	5.0
Grapefruit	5.0	Papaya	5.0	Watermelon	5.0
Kale	2.0	Pea	1.0	Welsh Onion	5.0

Kidney Bean	1.0	Peach	5.0	Wheat	0.05

(83) Ethion

◎ Residue definition : Ethion

Almond	0.01	Citrus fruits	0.01	Other Agricultural Product	0.01

(84) Ethalfluralin

◎ Residue definition : Ethalfluralin

Barley	0.05	Green & Red Pepper(Fresh)	0.05	Potato	0.05
Beans	0.05	Green Garlic	0.05	Sunflower Seed	0.05
Carrot	0.05	Job' Tear	0.05	Watermelon	0.05
Garlic	0.05	Onion	0.05	Yam*	0.05
Ginger	0.05	Peanut	0.05		

(85) Etofenprox

◎ Residue definition : Etofenprox

Blueberry	5.0	Korean Cabbage, Head	0.7	Rubi Fructus	1.0
Cabbage	0.2	Korean Cabbage, Head(Drie	2.5	Rye	0.05
Corn	0.1	Korean Melon	1.0	Soy Bean	0.2
Cucumber	1.0	Mandarin	5.0	Stone Fruits/Jujube(Dried)	2.0
Eggplant	0.5	Millet	2.0	Strawberry	1.0
Garlic	0.1	Onion	0.1	Sweet Pepper	2.0
Grape(Wild Grapes)	3.0	Other Agricultural Products	0.01	Sweet Potato	0.2
Green & Red Pepper(Fresh)	2.0	Parsley	20	Tomato	2.0
Green Soy Bean	3.0	Pome Fruits	1.0	Water Dropwort	2.0
Kiwifruit	0.5	Potato	0.01	Watermelon	0.2
Korean Cabbage	2.0	Red Bean	0.05	Welsh Onion	2.0
Korean Cabbage(Dried)	7.0	Rice	1.0	Welsh Onion(Dried)	10

(86) Ethoprophos(Ethoprop)

◎ Residue definition : Ethoprophos

Banana	0.02	Lettuce(Leaf)	0.02	Rye	0.005
Barley	0.005	Melon	0.02	Sorghum	0.005
Buckwheat	0.005	Millet	0.005	Soy Bean	0.02
Cabbage	0.02	Oat	0.005	Spinach	0.02
Corn	0.02	Onion	0.02	Strawberry	0.02
Cucumber	0.02	Peanut	0.02	Sweet Pepper	0.02

Garlic	0.02	Pineapple	0.02	Sweet Potato	0.02
Grape	0.02	Potato	0.02	Tomato	0.02
Green & Red Pepper(Fresh)	0.02	Radish(Root)	0.02	Wheat	0.005
Lettuce(Head)	0.02	Rice	0.005		

(87) Ethoxyquin

◎ Residue definition : Ethoxyquin

Apple	3.0	Pear	3.0

(88) Etrimfos

◎ Residue definition : Etrimfos

Cherry	0.01	Other Agricultural Products	0.01

(89) Ethylene dibromide : EDB

◎ Residue definition : Ethylene dibromide

Barley	0.5	Mango	0.03	Rice	0.5
Buckwheat	0.5	Oat	0.5	Rye	0.5
Corn	0.5	Orange	0.2	Sorghum	0.5
Grapefruit	0.2	Other Citrus Fruits	0.2	Soy Bean	0.001
Lemon	0.2	Papaya	0.25	Wheat	0.5

(90) Endosulfan

◎ Residue definition : Sum of α-endosulfan, β-endosulfan and endosulfan sulfate

Almond	0.05	Green & Red Pepper(Fresh)	0.1	Radish(Leaves)	0.1
Apricot	0.1	Kiwifruit	0.1	Radish(Root)	0.1
Asparagus	0.1	Korean Cabbage, Head	0.2	Rye	0.05
Banana	0.1	Korean Melon	0.1	Sorghum	0.05
Barley	0.05	Lemon	0.1	Strawberry	0.2
Buckwheat	0.05	Oat	0.05	Walnut	0.05
Chestnut	0.05	Other Agricultural Products	0.05	Watermelon	0.1
Garlic	0.1	Pecan	0.05	Welsh Onion	0.1
Grapefruit	0.1				

(91) Endrin

◎ Residue definition : Sum of endrin and δ-keto-endrin

Fruiting vegetable	0.05	Other Agricultural Products	0.01

(92) MCPB

◎ Residue definition : MCPB

Pea	0.1	Rice	0.1

(93) Omethoate

◎ Residue definition : Omethoate

Apple	0.4	Green & Red Pepper(Fresh)	0.01	Peach	0.2
Apricot	0.01	Hop	3.0	Peanut	0.01
Banana	0.01	Kale	0.01	Pear	0.01
Barley	0.01	Lemon	0.01	Plum	0.01
Buckwheat	0.01	Lettuce(Head)	0.01	Potato	0.01
Cabbage	0.01	Mung Bean	0.01	Red Bean	0.01
Carrot	0.01	Oat	0.01	Rice	0.01
Celery	0.1	Onion	0.01	Rye	0.01
Cherry	0.01	Orange	0.01	Sorghum	0.01
Corn	0.01	Other Beans	0.01	Spinach	0.01
Cucumber	0.01	Other Cereal Grains	0.01	Strawberry	0.01
Grape	0.01	Other Citrus Fruits	0.2	Tomato	0.01
Grapefruit	0.01	Pea	0.01	Wheat	0.01

(94) Oxadiazon

◎ Residue definition : Oxadiazon

Apricot	0.05	Job' Tear	0.05	Plum	0.05
Cherry	0.05	Other Nuts	0.05	Potato	0.1
Chestnut	0.05	Peach	0.05	Quince	0.05
Garlic	0.1	Pear	0.05	Rice	0.05
Green & Red Pepper(Fresh)	0.1	Pecan	0.05	Walnut	0.05

(95) Oxadixyl

◎ Residue definition : Oxadixyl

Barley	0.1	Korean Cabbage, Head	0.1	Rye	0.1
Buckwheat	0.1	Lettuce(Head)	0.1	Sesame Seed	1.0
Cabbage	0.1	Melon	0.1	Sorghum	0.1
Carrot	0.1	Millet	0.1	Soy Bean	0.1
Celery	0.1	Oat	0.1	Spinach	0.1
Corn	0.1	Onion	5	Squash	0.1
Cucumber	1.0	Other Cereal Grains	0.1	Sweet Pepper	0.1
Eggplant	0.1	Pea	0.1	Sweet Potato	0.1
Ginger	0.1	Potato	1.0	Taro	0.1
Grape	2.0	Radish(Root)	0.1	Tomato	0.1
Green & Red Pepper(Fresh)	1.0	Rice	1.0	Watermelon	1.0
Kale	0.1				

(96) Oxamyl

◎ Residue definition : Sum of Oxamyl and oxamyl-oxime, expressed as oxamyl

Almond	0.5	Kale	1.0	Pecan	0.5
Apple	2.0	Kiwifruit	0.5	Persimmon	0.5
Apricot	0.5	Korean Cabbage, Head	1.0	Pineapple	1.0
Asparagus	1.0	Korean Plum	0.5	Plum	0.5
Avocado	0.5	Lemon	5.0	Potato	0.1
Banana	0.2	Lettuce(Head)	1.0	Quince	0.5
Barley	0.02	Lettuce(Leaf)	1.0	Radish(Leaves)	1.0
Buckwheat	0.02	Mandarin	5.0	Radish(Root)	0.1
Cabbage	1.0	Mango	0.5	Rice	0.02
Carrot	0.2	Melon	2.0	Rye	0.02
Celery	5.0	Millet	0.02	Sesame Seed	0.5
Cherry	0.5	Oak Mushroom	1.0	Sorghum	0.02
Chestnut	0.5	Oat	0.02	Soy Bean	0.1
Chieves	1.0	Onion	0.05	Spinach	2.0
Corn	0.05	Orange	5.0	Squash	2.0
Cotton Seed	0.2	Other Citrus Fruits	5.0	Strawberry	2.0
Crown Daisy	1.0	Other Fruits	0.5	Sunflower Seed	0.5
Cucumber	2.0	Other Mushrooms	1.0	Sweet Pepper	2.0
Eggplant	2.0	Other Nuts	0.5	Sweet Potato	0.1
Garlic	1.0	Other Seeds	0.5	Taro	0.1
Ginger	1.0	Other Vegetables	1.0	Tomato	2.0
Gingko Nut	0.5	Papaya	0.5	Walnut	0.5
Grape	0.5	Peach	0.5	Watermelon	2.0
Grapefruit	5.0	Peanut	0.1	Welsh Onion	1.0

(97) Oxyfluorfen

◎ Residue definition : Oxyfluorfen

Apricot	0.05†	Cotton Seed	0.05†	Papaya	0.05
Avocado	0.05†	Garlic	0.05	Peach	0.05†
Banana	0.05†	Grape	0.05	Plum	0.05†
Cabbage	0.05†	Green Garlic	0.05	Pome Fruits	0.05
Cacao Bean	0.05	Kiwifruit	0.05†	Quince	0.05
Cherry	0.05†	Mandarin	0.05	Soy Bean	0.05†
Coffee Bean	0.05†	Nuts	0.05†	Taro	0.05
Corn	0.05†	Onion	0.05		

(98) Ortho Phenyl Phenol(OPP)

◎ Residue definition : 2-phenylphenol

Apple	10.0	Lemon	10.0	Pear	10.0
Carrot	10.0	Mandarin	10.0	Pineapple	10.0
Cherry	3.0	Orange	10.0	Plum	10.0
Cucumber	10.0	Other Citrus Fruits	10.0	Sweet Potato	10.0
Green & Red Pepper(Fresh)	10.0	Peach	10.0	Tomato	10.0
Grapefruit	10.0				

(99) 2, 4-D(2, 4 dichlorophenoxyacetic acid)

◎ Residue definition : 2,4-D

Almond	0.2	Cotton Seed	0.1	Plum	0.1
Apple	2.0	Eggplant	0.1	Potato	0.2
Apricot	2.0	Ginger	0.1	Radish(Root)	0.1
Asparagus	0.1	Grape	0.5	Rice	0.05
Avocado	1.0	Grapefruit	0.15†	Rye	0.5
Barley	0.5	Green & Red Pepper(Fresh)	0.1	Sorghum	0.05
Buckwheat	0.5	Lemon	1.0†	Soy Bean	0.1
Carrot	0.1	Lettuce(Head)	0.1	Spinach	0.1
Celery	0.1	Oat	0.5	Strawberry	0.05
Cherry	0.1	Orange	0.05†	Tomato	0.1
Chestnut	0.2	Pear	2.0	Walnut	0.2
Corn	0.05	Pecan	0.2	Wheat	0.5

(100) Imazalil

◎ Residue definition : Imazalil

Apple	5.0	Mandarin	5.0	Potato	5.0
Avocado	2.0	Mango	2.0	Quince	5.0
Banana	2.0	Melon	2.0	Rice	0.05
Barley	0.05	Millet	0.05	Rye	0.05
Buckwheat	0.05	Oat	0.05	Sorghum	0.05
Corn	0.05	Orange	5.0	Squash	2.0
Cotton Seed	0.05	Other Citrus Fruits	5.0	Strawberry	2.0
Cucumber	0.5	Papaya	2.0	Sweet Pepper	0.5
Eggplant	0.5	Pear	5.0	Tomato	0.5
Grapefruit	5.0	Persimmon	2.0	Watermelon	2.0
Kiwifruit	2.0	Pineapple	2.0	Wheat	0.01
Lemon	5.0				

(101) Imidacloprid

◎ Residue definition : Imidacloprid

Artemisia	0.3	Green & Red Pepper(Fresh)	1.0	Perilla Leaves	7.0
Bonnet Bellflower	0.05	Green Soy Bean	0.2	Plum	0.2
Broccoli	5.0	Jujube*	2.0	Pome Fruits	0.5
Butterbur	1.0	Kiwifruit	1.0	Potato	0.3
Chamnamul	1.0	Korean Cabbage	1.0	Rape(leaves)	0.05
Chard	1.0	Korean Cabbage, Head	0.3	Rape(seeds)	0.05
Chicory(Endive)	3.0	Korean Melon	0.3	Rice	0.05
Chieves	3.0	Korean Plum	1.0	Rubi Fructus	0.5
Chinese Matrimony Vine(Dried)	5.0	Lettuce(Leaf)	7.0	Soybean	0.05
Chwinamul	3.0	Mandarin	0.5	Squash	0.5
Crown Daisy	2.0	Marsh Mallow	1.0	Strawberry	0.3
Cucumber	0.5	Melon	0.2	Sweet Pepper	1.0
Eggplant	1.0	Mustard Green	5.0	Tomato	0.5
Fig	0.3	Other Agricultural Products	0.05	Watermelon	0.05
Grape	1.0	Peach	0.5	Welsh Onion	0.5
Green & Red Pepper(Dried)	3.0	Pepper Leaves	1.0	Welsh Onion(Dried)	2.0

(102) Sulfur dioxide

◎ Residue definition : Sulfur dioxide

Grape	10.0

(103) Isofenphos

◎ Residue definition : Isofenphos

Banana	0.02	Kale	0.05	Orange	0.2
Cabbage	0.05	Korean Cabbage, Head	0.05	Other Citrus Fruits	0.2
Celery	0.02	Lemon	0.2	Potato	0.05
Corn	0.02	Onion	0.05	Rice	0.05
Grapefruit	0.2				

(104) Isoprocarb MIPC

◎ Residue definition : Isoprocarb

Rice	0.3

(105) Iprodione

◎ Residue definition : Iprodione

Almond	0.3	Green & Red Pepper(Dried)	15	Pear	10.0
Apple	10.0	Green & Red Pepper(Fresh)	5.0	Persimmon	5.0
Apricot	10.0	Job' Tear	3.0	Plum	10.0
Banana	0.02	Kiwifruit	5.0	Potato	0.5
Barley	2.0	Lettuce(Head)	10.0	Rice	3.0
Beans	0.2	Mandarin	2.0	Strawberry	10.0
Cherry	10.0	Onion	0.1	Sweet Pepper	5.0
Cucumber	5.0	Peach	10.0	Tomato	5.0
Garlic	0.1	Peanut	0.5	Watermelon	0.2
Grape	10.0				

(106) EPN

◎ Residue definition : EPN

Apple	0.2	Other Agricultural Products	0.05	Pear	0.2

(107) Chinomethionat

◎ Residue definition : Chinomethionat

Other Agricultural Products	0.05	Rice	0.1

(108) Thiometon

◎ Residue definition : Thiometon

Other Agricultural Products	0.05	Potato	0.05	Rice	0.05

(109) Thiophanate methyl

◎ Residue definition : Sum of benomyl, carbendazim and thiophanate-methyl, expressed as carbendazim

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (112) Carbend

(110) Cadusafos

◎ Residue definition : Cadusafos

Carrot	0.05	Kiwifruit	0.02	Sesame Seed	0.01
Chamnamul	0.1	Korean Cabbage	0.05	Spinach	0.05
Chieves	0.5	Korean Cabbage, Head	0.05	Tomato	0.05
Chwinamul	0.2	Korean Melon	0.01	Watermelon	0.01
Cucumber	0.05	Melon	0.05	Welsh Onion	0.02
Garlic	0.05	Other Agricultural Products	0.01	Yam	0.05
Green & Red Pepper(Fresh)	0.05	Perilla Leaves	0.05	Yam(Dried)	0.05
Green Garlic	0.05	Potato	0.02		

(111) Cabaryl : NAC

◎ Residue definition : Carbaryl

Almond	1.0	Grape	0.5	Potato	0.2
Apple	1.0	Green & Red Pepper(Fresh)	0.5	Radish(Leaves)	0.5
Apricot	1.0	Korean Cabbage, Head	0.5	Radish(Root)	0.5
Asparagus	1.0	Korean Melon	0.5	Rice	1.0
Avocado	1.0	Lettuce(Head)	1.0	Rye	1.0
Barley	1.0	Oat	1.0	Sorghum	1.0
Buckwheat	1.0	Other Beans	1.0	Soy Bean	1.0
Cabbage	0.5	Other Cereal Grains	1.0	Spinach	0.5
Carrot	0.5	Pea	1.0	Squash	1.0
Celery	1.0	Peach	1.0	Strawberry	0.5
Cherry	1.0	Peanut	2.0	Sunflower Seed	0.5
Chestnut	0.5	Pear	0.5	Sweet Pepper	1.0
Corn	1.0	Pecan	0.5	Tomato	0.5
Cotton Seed	0.5	Pineapple	0.5	Walnut	0.5
Cucumber	0.5	Plum	1.0	Wheat	3.0
Eggplant	0.5				

(112) Carbendazim

◎ Residue definition : Sum of benomyl, carbendazim and thiophanate-methyl, expressed as carbendazim

Bonnet Bellflower	0.05	Korean Cabbage	2.0	Pumpkin Young Leaves	10
Cabbage	1.0	Korean Cabbage, Head	0.7	Rape(Leaves)	0.1
Chamnamul	2.0	Korean Melon	1.0	Rape Seeds	0.5
Chieves	1.0	Lettuce(Head)	5.0	Rice	0.5
Corn	0.5	Lettuce(Leaf)	5.0	Sedum	10
Crown Daisy	10	Mandarin	5.0	Sesame Seed	0.5
Cucumber	1.0	Melon	2.0	Soy Bean	0.2
Eggplant	0.5	Onion	0.05	Squash	0.5
Garlic	1.0	Other Agricultural Products	0.01	Strawberry	2.0
Grape(Wild Grapes)	3.0	Oyster mushroom	1.0	Sweet Pepper	5.0
Green & Red Pepper(Dried)	15	Peach	2.0	Tea	2.0
Green & Red Pepper(Fresh)	5.0	Peanut	0.1	Tomato	2.0
Green Tea Extract	5.0	Perilla Leaves	20	Watermelon	1.0
Jujube	2.0	Plum	0.5	Welsh Onion	5.0
Jujube(Dried)	4.0	Pome Fruits	3.0	Yuja, *Citrus junos*	3.0
Kiwifruit	3.0				

(113) Carbophenothion

◎ Residue definition : Carbophenothion

Apricot	0.02	Fruits	0.02	Peanut or Nuts	0.02
Beans	0.02	Oil Seed	0.02	Potatoes	0.02
Cereal Grains	0.02	Other Agricultural Products	0.02	Vegetables	0.02

(114) Carbofuran

◎ Residue definition : Sum of carbofuran and 3-hydroxycarbofuran, expressed as carbofuran

Apple	0.5	Green Garlic	0.05	Peach	0.2
Asparagus	0.1	Hop	0.5	Peanut	0.5
Banana	0.1	Korean Cabbage	0.3	Pear	0.2
Barley	0.1	Korean Cabbage, Head	0.3	persimmon	0.7
Butterbur	2.0	Korean Melon	0.1	Potato	0.5
Cabbage	0.5	Korean Plum	0.7	Raisin	0.5
Carrot	0.5	Lemon	2.0	Rice	0.3
Celery	0.1	Lettuce(Head)	0.1	Sesame Seed	0.1
Chard	2.0	Mandarin	0.5	Sorghum	0.1
Chestnut	0.05	Marsh Mallow	1.0	Soy Bean	0.2
Coffee Bean	0.1	Melon	0.4	Squash	0.5

Corn	0.1	Mushrooms	0.1	Strawberry	0.1
Cotton Seed	0.1	Mustard Green	0.05	Sunflower Seed	0.1
Cucumber	0.5	Oat	0.1	Sweet Pepper	0.5
Eggplant	0.1	Onion	0.1	Tomato	0.1
Garlic	0.1	Orange	2.0	Watermelon	0.1
Grape	0.1	Other Beans	0.2	Welsh Onion	0.5
Grapefruit	2.0	Other Citrus Fruits	2.0	Wheat	0.1
Green & Red Pepper(Fresh)	0.7	Other Seeds	0.1		

(115) Carboxin

◎ Residue definition : Carboxin

Barley	0.2	Other Beans	0.2	Sorghum	0.2
Corn	0.2	Peanut	0.2	Soy Bean	0.2
Cotton Seed	0.2	Rice	0.2	Wheat	0.2

(116) Cartap

◎ Residue definition : Nereistoxin

Apple	0.7	Kiwifruit	3.0	Potato	0.1
Cabbage	0.2	Korean Cabbage, Head	2.0	Radish(Root)	1.0
Chestnut	0.1	Mandarin	1.0	Rice	0.1
Corn	0.1	Other Agricultural Products	0.05	Sweet Pepper	0.5
Cucumber	0.2	Pear	1.0	Tomato	1.0
Ginger	0.1	Pepper Leaves	2.0	Watermelon	0.1
Grape	1.0	Perilla Leaves	3.0	Welsh Onion	2.0
Green&Red Pepper(Fresh)	0.5	Persimmon	1.0	Yam	0.05
Hop	5.0				

(117) Captafol

◎ Residue definition : Captafol

Other Agricultural Products	0.02	Potato	0.02

(118) Captan

◎ Residue definition : Captan

Almond	2.0	Green & Red Pepper(Fresh)	5.0	Plum	5.0
Apple	5.0	Kale	2.0	Potato	0.05
Apricot	10.0	Korean Cabbage	20	Radish(Root)	2.0
Avocado	5.0	Korean Cabbage, Head	3.0	Radish(Root)(Dried)	3.0

Barley	5.0	Lettuce(Head)	5.0	Raisin	5.0
Cabbage	2.0	Mandarin	0.5	Rubi Fructus	5.0
Carrot	2.0	Mango	5.0	Soy Bean	2.0
Carrot(Dried)	3.0	Melon	5.0	Spinach	5.0
Celery	5.0	Onion	5.0	Squash	5.0
Cherry	5.0	Other Beans	5.0	Strawberry	5.0
Cotton Seed	2.0	Pea	2.0	Sweet Pepper	10.0
Cucumber	5.0	Peach	0.5	Tomato	5.0
Eggplant	5.0	Peanut	2.0	Watermelon	5.0
Garlic	5.0	Pear	5.0	Welsh Onion	5.0
Grape	5.0	Pineapple	5.0	Wheat	5.0

(119) Quizalofop ethyl

◎ Residue definition : Quizalofop-ethyl

Cotton Seed	0.05	Onion	0.05	Strawberry	0.05
Garlic	0.05	Soy Bean	0.05	Watermelon	0.05

(120) Quintozene

◎ Residue definition : Quintozene

Barley	0.01	Cotton Seed	0.01	Wheat	0.01
Corn	0.01	Other Agricultural Products	0.01		

(121) Clethodim

◎ Residue definition : Sum of clethodim and its metabolites containing 5-(2-ethylthiopropyl)cyclohexene-3-one and

Balloon Flower	0.1	Potato	0.2	Soy Bean	10
Cotton Seed	0.2	Radish(Leaves)	0.1	Strawberry	0.1
Garlic	0.2	Radish(Root)	0.1	Welsh Onion	0.1
Onion	0.2	Sesame Seed	0.1		

(122) Clomazone

◎ Residue definition : Clomazone

Cotton Seed	0.05	Rice	0.1	Sweet Pepper	0.05
Green & Red Pepper(Fresh)	0.05	Soy Bean	0.05	Sweet Potato	0.05
Pea	0.05	Squash	0.1		

(123) Clofentezine

◎ Residue definition : Clofentezine

Almond	0.5	Kiwifruit	1.0	Peach	0.2
Apple	1.0	Korean Plum	0.2	Pear	0.5
Apricot	0.2	Lemon	0.5	Pecan	1.0
Avocado	1.0	Mandarin	0.5	Persimmon	1.0
Banana	1.0	Mango	1.0	Pineapple	1.0
Cherry	0.2	Melon	1.0	Plum	0.2
Chestnut	1.0	Mung Bean	0.2	Quince	0.5
Cotton Seed	1.0	Orange	0.5	Red Bean	0.2
Gingko Nut	1.0	Other Citrus Fruits	0.5	Sesame Seed	1.0
Grape	1.0	Other Fruits	1.0	Strawberry	2.0
Grapefruit	0.5	Other Nuts	1.0	Sunflower Seed	1.0
Hop	0.2	Other Seeds	1.0	Walnut	0.02
Kidney Bean	0.2	Papaya	1.0	Watermelon	1.0

(124) Chlorobenzilate

◎ Residue definition : Chlorobenzilate

Beans	0.02	Oil Seed	0.02	Potatoes	0.02
Cereal Grains	0.02	Other Agricultural Products	0.02	Vegetables	0.02
Fruits	0.02	Peanut or Nuts	0.02		

(125) Chlorothalonil

◎ Residue definition : Chlorothalonil

Apple	2.0	Korean Cabbage	5.0	Pineapple	0.01
Carrot	1.0	Korean Cabbage, Head	2.0	Plum	2.0
Cucumber	5.0	Korean Melon	5.0	Potato	0.1
Eggplant	3.0	Korean Plum	7.0	Rubi Fructus	1.0
Garlic	0.3	Mandarin	5.0	Sesame Seed	0.2
Garlic(Dried)	0.7	Melon	2.0	Strawberry	1.0
Grape	5.0	Onion	1.0	Sweet Pepper	7.0
Green & Red Pepper(Dried)	15	Other Agricultural Products	0.05	Tomato	5.0
Green & Red Pepper(Fresh)	5.0	Peach	2.0	Watermelon	0.1
Green Garlic	2.0	Peanut	0.3	Welsh Onion	2.0
Jujube	0.7	Pear	1.0	Yam*	0.1
Jujube(Dried)	2.0	Persimmon	0.5		

(126) Chlordane

◎ Residue definition : Chlordane (Sum of cis- and trans-chlordane)

Almond	0.02	Pecan	0.02	Vegetables	0.02
Corn	0.02	Rice	0.02	Walnut	0.02
Fruits	0.02	Rye	0.02	Wheat	0.02
Oat	0.02	Sorghum	0.02		

(127) Chlormequat

◎ Residue definition : Chlormequat (Chlormequat cation)

Barley	5.0	Oat	10.0	Rice	0.05
Buckwheat	10.0	Other Fruits	1.0	Rye	10.0
Corn	5.0	Pear	3.0	Sorghum	10.0
Grape	1.0	Potato	10.0	Wheat	5.0
Millet	10.0				

(128) Chlorsulfuron

◎ Residue definition : Chlorsulfuron

Barley	0.1	Oat	0.1	Wheat	0.1

(129) Chlorfenvinphos

◎ Residue definition : Chlorfenvinphos (Sum of residues of (E)-chlorfenvinphos and (Z)-chlorfenvinphos)

Beans	0.05	Oil Seed	0.05	Potatoes	0.05
Cereal Grains	0.05	Other Agricultural Products	0.05	Vegetables	0.05
Fruits	0.05	Peanut or Nuts	0.05		

(130) Chlorpropham

◎ Residue definition : Chlorpropham

Almond	0.05	Kiwifruit	0.05	Persimmon	0.05
Apple	0.05	Korean Cabbage, Head	0.05	Pineapple	0.05
Apricot	0.05	Korean Melon	0.05	Plum	0.05
Asparagus	0.05	Lemon	0.05	Potato	50.0
Avocado	0.05	Lettuce(Head)	0.05	Quince	0.05
Banana	0.05	Mango	0.05	Radish(Root)	0.05
Barley	0.05	Melon	0.05	Red Bean	0.05
Buckwheat	0.05	Mung Bean	0.05	Rice	0.1
Cabbage	0.05	Mushrooms	0.05	Rye	0.05
Carrot	0.1	Oat	0.05	Sesame Seed	0.05
Celery	0.05	Onion	0.05	Sorghum	0.05
Cherry	0.05	Orange	0.05	Soy Bean	0.2
Chestnut	0.05	Other Beans	0.2	Spinach	0.2

Corn	0.05	Other Cereal Grains	0.05	Squash	0.05
Cotton Seed	0.05	Other Citrus Fruits	0.05	Strawberry	0.05
Cucumber	0.05	Other Fruits	0.05	Sunflower Seed	0.05
Eggplant	0.05	Other Seeds	0.05	Sweet Pepper	0.05
Garlic	0.1	Other Vegetables	0.05	Sweet Potato	0.05
Ginger	0.05	Papaya	0.05	Taro	0.05
Gingko Nut	0.05	Pea	0.05	Tomato	0.1
Grape	0.05	Peach	0.05	Walnut	0.05
Grapefruit	0.05	Peanut	0.05	Watermelon	0.05
Green & Red Pepper(Fresh)	0.05	Pear	0.05	Welsh Onion	0.05
Kale	0.05	Pecan	0.05	Wheat	0.05

(131) Chlorpyrifos

◎ Residue definition : Chlorpyrifos

Almond	0.2	Kiwifruit	2.0	Plum	1.0
Apricot	1.0	Korean Cabbage	0.2	Pome Fruits	1.0
Asparagus	0.5	Korean Cabbage, Head	0.2	Potato	0.05
Avocado	0.5	Korean Melon	0.5	Quince	0.5
Banana	0.25	Korean Plum	1.0	Radish(Root)	2.0
Barley	0.1	Lemon	0.3	Rice	0.1
Buckwheat	0.1	Lettuce(Head)	0.1	Rye	0.1
Cabbage	0.1	Mandarin	1.0	Sesame Seed	0.5
Carrot	0.5	Mango	0.5	Sorghum	0.1
Celery	0.05	Melon	0.5	Soy Bean	0.3
Cherry	0.5	Mushrooms	0.05	Spinach	0.01
Chestnut	0.2	Oat	0.1	Squash	0.1
Corn	0.1	Onion	0.5	Strawberry	0.5
Cotton Seed	0.05	Orange	0.3	Sunflower Seed	0.5
Cucumber	0.1	Other Beans	0.1	Sweet Pepper	0.5
Eggplant	0.2	Other Cereal Grains	0.1	Sweet Potato	0.05
Garlic	0.5	Other Citrus Fruits	0.5	Taro	0.01
Ginger	0.01	Other Fruits	0.5	Tea	2.0
Gingko Nut	0.2	Other Vegetables	0.01	Tomato	0.5
Grape	1.0	Papaya	0.5	Walnut	0.2
Grapefruit	0.3	Pea	0.2	Watermelon	0.5
Green & Red Pepper(Dried)	1.0	Peach	0.5	Welsh Onion	0.01
Green & Red Pepper(Fresh)	0.5	Peanut	0.5	Wheat	0.1
Green Tea Extract	3.0	Pecan	0.2	Wheat Flour	0.02
Kale	1.0	Pineapple	0.5		

(132) Chlorpyrifos-methyl

◎ Residue definition : Chlorpyrifos-methyl

Grape	1.0	Korean Cabbage, Head	0.07	Rice	0.1
Korean Cabbage	0.2	Other Agricultural Products	0.05		

(133) Tebuconazole

◎ Residue definition : Tebuconazole

Banana	0.05	Green Tea Extract	10	Pome Fruits	0.5
Bonnet Bellflower	0.05	Jujube/Jujube(Dried)	5.0	Rice	0.05
Chard	15	Korean Cabbage, Head	0.05	Strawberry	0.5
Chinese Matrimony Vine(Dried)	10	Mandarin	2.0	Sweet Pepper	0.5
Cucumber	0.2	Onion	0.05	Tea	5.0
Garlic	0.1	Peach	0.5	Tomato	0.2
Grape	2.0	Peanut	0.1	Watermelon	1.0
Green & Red Pepper(Dried)	5.0	Pepper Leaves	5.0	Welsh Onion	3.0
Green & Red Pepper(Fresh)	1.0	Perilla Leaves	15	Wild Garlic	2.0
Green Garlic	2.0	Persimmon	2.0	Yam*	0.1

(134) Terbutryn

◎ Residue definition : Terbutryn

Barley	0.1	Other Agricultural Products	0.05	Wheat	0.1

(135) Terbufos

◎ Residue definition : Sum of terbufos, its oxygen analogue and their sulfoxides and sulfones, expressed as terbufos

Garlic(Green Garlic)	0.05	Other Agricultural Products	0.01	Radish(Root)	0.05
Green & Red Pepper(Fresh)	0.05	Peanut	0.05	Spinach	0.05
Korean Cabbage, Head	0.05	Potato	0.01	Tomato	0.01
Mustard Leaf	0.1	Radish(Leaves)	0.05	Welsh Onion	0.05
Onion	0.05				

(136) Tecnazene

◎ Residue definition : Tecnazene

Lettuce, head	2.0	Potato	1.0

(137) Tetradifon

◎ Residue definition : Tetradifon

Apple	3.0	Green&Red Pepper(Fresh)	1.0	Pear	5.0
Apricot	2.0	Hop	1.0	Plum	2.0
Asparagus	1.0	Korean Melon	1.0	Quince	2.0
Celery	1.0	Lemon	2.0	Squash	1.0
Cherry	2.0	Mandarin	3.0	Strawberry	2.0
Cucumber	1.0	Melon	1.0	Sweet Pepper	1.0
Fig	1.0	Orange	2.0	Tomato	1.0
Grape	2.0	Other Citrus Fruits	2.0	Watermelon	1.0
Grapefruit	2.0	Peach	2.0		

(138) Tolylfluanid

◎ Residue definition : Tolylfluanid

Persimmon	2.0	Pear	5.0	Tomato	2.0
Raisin	5.0	Apple	5.0	Grape	2.0
Green & Red Pepper(Fresh)	2.0	Watermelon	0.5	Sweet Pepper	2.0
Strawberry	3.0	Lettuce(Head)	1.0		
Mandarin	5.0	Cucumber	2.0		

(139) Tolclofos-methyl

◎ Residue definition : Tolclofos-methyl

Apple	0.05	Potato	0.2	Strawberry	0.2
Melon	0.05				

(140) Tralomethrin

◎ Residue definition : Sum of deltamethrin alpha-R, trans-deltamethrin

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (9) Deltamethrin.

(141) Triadimenol

◎ Residue definition : Triadimenol

Apple	0.5	Grape	0.5	Perilla Leaves	3.0
Barley	0.05	Korean Melon	0.5	Quince	0.5
Chwinamul	3.0	Melon	0.5	Welsh Onion	0.3
Corn	0.05	Papaya	0.2	Wheat	0.05
Cucumber	0.5	Pear	0.5		

(142) Triadimefon

◎ Residue definition : Triadimefon

Apple	0.5	Grape	1.0	Squash	0.2
Barley	0.5	Melon	0.2	Sweet Pepper	0.5
Chinese Matrimony Vine	0.2	Onion	0.1	Tomato	0.5
Chinese Matrimony	0.5	Pea	0.1	Watermelon	0.2
Cucumber	0.2	Pear	0.5	Welsh Onion	0.1
Eggplant	0.2	Pineapple	3.0	Wheat	0.1

(143) Triazophos

◎ Residue definition : Triazophos

Apple	0.2	Coffee Bean	0.05	Pear	0.2
Broad Bean	0.02	Cotton Seed	0.1	Potato	0.05
Cabbage	0.1	Mandarin	0.2	Soy Bean	0.05
Carrot	0.5	Onion	0.05	Strawberry	0.05
Cereal Grains	0.05				

(144) Tri-allate

◎ Residue definition : Tri-allate

Barley	0.05	Pea	0.05	Wheat	0.05

(145) Trichlorfon(DEP)

◎ Residue definition : Dichlorvos

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (21) Dichlorvos.

(146) Triclopyr

◎ Residue definition : Triclopyr

Mandarin	0.1	Rice	0.3

(147) Triforine

◎ Residue definition : Triforine

Apple	2.0	Eggplant	0.5	Squash	0.3
Barley	0.1	Green & Red Pepper(Fresh)	2.0	Strawberry	1.0
Cherry	2.0	Maximowiczia	1.0	Sweet Pepper	2.0
Chinese Matrimony Vine	0.5	Other Cereal Grains	0.01	Tomato	0.5
Chinese Matrimony	1.0	Peach	5.0	Watermelon	0.5
Corn	0.01	Plum	2.0	Wheat	0.01

Cucumber	0.5	Rice	0.01		

(148) Trifluralin

◎ Residue definition : Trifluralin

Apricot	0.05	Ginger	0.05	Plum	0.05
Asparagus	0.05	Grape	0.05	Potato	0.05
Barley	0.05	Green & Red Pepper(Fresh)	0.05	Radish(Leaves)	0.05
Beans	0.1	Green Soy Bean	0.05	Radish(Root)	0.05
Carrot	1.0	Hop	0.05	Spinach	0.05
Celery	0.05	Korean Cabbage	0.05	Squash	0.05
Cherry	0.05	Korean Cabbage, Head	0.05	Sunflower Seed	0.05
Citrus Fruits	0.05	Lettuce(Head)	0.05	Sweet Pepper	0.05
Corn	0.05	Melon	0.05	Sweet Potato	0.05
Cotton Seed	0.05	Other Cereal Grains	0.05	Taro	0.05
Cucumber	0.05	Other Nuts	0.05	Tomato	0.05
Eggplant	0.05	Peach	0.05	Watermelon	0.05
Garlic	0.05	Peanut	0.05	Wheat	0.05

(149) Triflumizole

◎ Residue definition : Triflumizole

Apple	1.0	Jujube(Dried)	5.0	Plum	0.2
Barley	0.5	Korean Melon	1.0	Sedum	7.0
Chieves	7.0	Korean Plum	0.1	Soy Bean	0.05
Cucumber	1.0	Mandarin	2.0	Squash	1.0
Eggplant	1.0	Melon	2.0	Strawberry	2.0
Garlic	0.05	Other Agricultural Products	0.05	Sweet Pepper	1.0
Grape	2.0	Peach	1.0	Tea	3.0
Green & Red Pepper(Fresh)	1.0	Pear	1.0	Tomato	1.0
Green Garlic	1.0	Pepper Leaves	2.0	Watermelon	0.5
Green Tea Extract	5.0	Perilla Leaves	5.0	Welsh Onion	0.5
Jujube	2.0	Persimmon	1.0		

(150) Thiabendazole

◎ Residue definition : Thiabendazole

Apple	10.0	Mango	10.0	Pear	10.0
Avocado	10.0	Mushrooms	40.0	Potato	5.0
Banana	3.0	Orange	10.0	Rice	0.2
Grapefruit	10.0	Other Cereal Grains	0.2	Strawberry	3.0
Lemon	10.0	Other Citrus Fruits	10.0	Wheat	0.2

Mandarin	10	Papaya	5.0		

(151) Thiodicarb

◎ Residue definition : Sum of thiodicarb, methomyl, expressed as methomyl

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (35) Methomyl.

(152) Thiobencarb

◎ Residue definition : Thiobencarb

Asparagus	0.2	Kidney Bean	0.2	Radish(Leaves)	0.2
Barley	0.1	Korean Cabbage	0.2	Radish(Root)	0.2
Broad Bean	0.2	Korean Cabbage, Head	0.2	Red Bean	0.2
Buckwheat	0.1	Lettuce(Head)	0.2	Rice	0.2
Cabbage	0.2	Lettuce(Leaf)	0.2	Rye	0.1
Carrot	0.2	Millet	0.1	Sorghum	0.1
Celery	0.2	Mung Bean	0.2	Soy Bean	0.2
Chieves	0.2	Oak Mushroom	0.2	Spinach	0.2
Corn	0.1	Oat	0.1	Squash	0.2
Crown Daisy	0.2	Onion	0.2	Sweet Pepper	0.2
Cucumber	0.2	Other Beans	0.2	Sweet Potato	0.05
Eggplant	0.2	Other Mushrooms	0.2	Taro	0.05
Garlic	0.2	Other Vegetables	0.2	Tomato	0.2
Ginger	0.2	Pea	0.2	Welsh Onion	0.2
Job' Tear	0.05	Peanut	0.2	Wheat	0.1
Kale	0.2	Potato	0.05		

(153) Parathion

◎ Residue definition : Parathion

Almond	0.1	Grape	0.3	Potato	0.05
Apple	0.3	Green & Red Pepper(Fresh)	0.3	Radish(Leaves)	0.3
Apricot	0.3	Hop	0.3	Radish(Root)	0.3
Asparagus	0.3	Kale	0.3	Rice	0.1
Avocado	0.3	Korean Cabbage, Head	0.3	Rye	0.3
Barley	0.3	Korean Melon	0.3	Sorghum	0.3
Bracken	0.3	Lettuce(Head)	0.3	Soy Bean	0.05
Buckwheat	0.3	Mango	0.5	Spinach	0.3
Cabbage	0.3	Melon	0.3	Squash	0.3
Carrot	0.3	Oat	0.3	Strawberry	0.3
Celery	0.3	Onion	0.3	Sunflower Seed	0.05
Cherry	0.3	Other Beans	0.3	Sweet Pepper	0.3

Corn	0.1	Pea	0.3	Sweet Potato	0.1
Cotton Seed	1.0	Peanut	0.3	Taro	0.3
Crown Daisy	0.3	Pear	0.3	Tomato	0.3
Cucumber	0.3	Pecan	0.1	Walnut	0.1
Eggplant	0.3	Persimmon	0.3	Watermelon	0.3
Garlic	0.3	Pineapple	0.3	Welsh Onion	0.3
Ginger	0.3	Plum	0.5	Wheat	0.3

(154) Paraquat

◎ Residue definition : Paraquat (Paraquat cation)

Corn	0.1	Potato	0.2	Soy Bean	0.1
Cotton Seed	0.2	Rice	0.5	Sunflower Seed	2.0
Green & Red	0.1	Sorghum	0.5	Vegetables	0.05
Hop	0.2				

(155) Parathion-Methyl

◎ Residue definition : Parathion-methyl

Almond	0.1	Hop	0.05	Potato	0.05
Apple	0.2	Kidney Bean	1.0	Quince	0.2
Apricot	0.2	Korean Cabbage, Head	0.2	Radish(Root)	0.05
Asparagus	1.0	Lettuce(Head)	0.5	Red Bean	1.0
Barley	1.0	Lettuce(Leaf)	1.0	Rice	1.0
Broad Bean	1.0	Melon	0.2	Rye	1.0
Buckwheat	1.0	Millet	1.0	Sorghum	1.0
Cabbage	0.2	Mung Bean	1.0	Soy Bean	0.1
Carrot	1.0	Mushrooms	1.0	Spinach	0.5
Celery	1.0	Oat	1.0	Squash	1.0
Cherry	0.01	Onion	1.0	Strawberry	0.2
Chieves	1.0	Other Beans	1.0	Sunflower Seed	0.2
Corn	1.0	Other Seeds	0.2	Sweet Pepper	1.0
Cotton Seed	1.0	Other Vegetables	1.0	Sweet Potato	0.1
Crown Daisy	1.0	Pea	0.2	Taro	1.0
Cucumber	0.2	Peanut	1.0	Tomato	0.2
Eggplant	1.0	Pear	0.2	Walnut	0.1
Garlic	1.0	Pecan	0.1	Watermelon	1.0
Ginger	1.0	Persimmon	0.2	Welsh Onion	1.0
Grape	0.2	Plum	0.01	Wheat	1.0
Green & Red Pepper(Fresh)	1.0				

(156) Paclobutrazol

◎ Residue definition : Paclobutrazol

Apple	0.5	Cherry	0.05	Perilla Leaves	5.0
Apricot	0.05	Peach	0.05	Plum	0.05

(157) Permethrin(Permetrin)

◎ Residue definition : Permethrin (Sum of cis-permethrin and trans-permethrin)

Almond	0.05	Kale	5.0	Pear	2.0
Apple	0.05	Kidney Bean	0.1	Pecan	5.0
Apricot	2.0	Kiwifruit	2.0	Persimmon	5.0
Asparagus	1.0	Korean Cabbage, Head	5.0	Pineapple	5.0
Avocado	1.0	Korean Plum	5.0	Plum	2.0
Banana	5.0	Lemon	0.5	Potato	0.05
Barley	2.0	Lettuce(Head)	2.0	Quince	2.0
Broad Bean	0.2	Lettuce(Leaf)	3.0	Radish(Leaves)	3.0
Buckwheat	2.0	Mandarin	0.5	Radish(Root)	0.1
Cabbage	5.0	Mango	5.0	Red Bean	0.1
Carrot	0.1	Melon	0.1	Rice	2.0
Celery	2.0	Millet	2.0	Rye	2.0
Cherry	5.0	Mung Bean	0.1	Sesame Seed	5.0
Chestnut	5.0	Oak Mushroom	3.0	Sorghum	2.0
Chieves	0.5	Oat	2.0	Soy Bean	0.05
Corn	0.05	Onion	3.0	Spinach	2.0
Cotton Seed	0.5	Orange	0.5	Squash	0.5
Crown Daisy	3.0	Other Beans	0.2	Strawberry	1.0
Cucumber	0.5	Other Citrus Fruits	0.5	Sunflower Seed	1.0
Eggplant	1.0	Other Fruits	5.0	Sweet Pepper	1.0
Garlic	3.0	Other Mushrooms	0.1	Sweet Potato	0.2
Ginger	3.0	Other Seeds	5.0	Taro	0.2
Gingko Nut	5.0	Other Vegetables	3.0	Tomato	1.0
Grape	2.0	Papaya	1.0	Walnut	0.05
Grapefruit	0.5	Pea	0.1	Watermelon	5.0
Green & Red	1.0	Peach	2.0	Welsh Onion	3.0
Hop	50.0	Peanut	0.1	Wheat	2.0

(158) Fenarimol

◎ Residue definition : Fenarimol

Banana	0.5	Grape	0.3	Onion	0.05

Barley	0.3	Green & Red Pepper(Fresh)	1.0	Peach	0.5
Burdock	1.0	Jujube	0.1	Pecan	0.1
Cherry	1.0	Jujube(Dried)	0.7	pome Fruits	0.3
Chinese Matrimony Vine	0.2	Korean Melon	0.3	Strawberry	1.0
Chwinamul	1.0	Maximowiczia	2.0	Sweet Pepper	0.5
Cucumber	0.5	Melon	0.1	Watermelon	0.3
Eggplant	0.3				

(159) Fenamiphos

◎ Residue definition : Sum of fenamiphos and its sulphoxide and sulphone, expressed as fenamiphos

Apple	0.2	Grape	0.1	Peach	0.2
Asparagus	0.02	Grapefruit	0.5	Peanut	0.05
Banana	0.1	Green & Red Pepper(Fresh)	0.2	Pineapple	0.05
Cabbage	0.05	Kiwifruit	0.05	Potato	0.2
Carrot	0.2	Korean Cabbage, Head	0.05	Raisin	0.3
Cherry	0.2	Korean Melon	0.05	Soy Bean	0.05
Coffee Bean	0.1	Lemon	0.5	Strawberry	0.2
Cotton Seed	0.05	Melon	0.05	Sweet Potato	0.1
Eggplant	0.1	Orange	0.5	Tomato	0.2
Garlic	0.2	Other Beans	0.05		

(160) Phenothrin

◎ Residue definition : Phenothrin (Sum of phenothrin cis- and trans-isomers)

Barley	2.0	Sorghum	2.0	Wheat	2.0
Rice	0.1				

(161) Fenoxaprop-ethyl

◎ Residue definition : Fenoxaprop-ethyl

Barley	0.05	Green Soy Bean	0.05	Rice	0.05
Cotton Seed	0.05	Onion	0.05	Soy Bean	0.05
Garlic	0.05	Peanut	0.05	Wheat	0.05
Green & Red Pepper(Fresh)	0.05				

(162) Fenitrothion : MEP

◎ Residue definition : Fenitrothion

Apple	0.5	Green & Red Pepper(Fresh)	0.1	Peanut	0.2
Artemisia	0.3	Green Soy Bean	0.3	Potato	0.05
Chestnut	0.1	Korean Cabbage	0.05	Rice	0.2
Citrus Fruits	2.0	Korean Cabbage, Head	0.05	Soy Bean	0.1
Garlic	0.03	Pea	0.5	Tea**	0.2

Grape	0.5	Peach	0.1	Welsh Onion	0.3

(163) Pendimethalin

◎ Residue definition : Pendimethalin

Apple	0.05	Korean Cabbage	0.07	Red Bean	0.2
Asparagus	0.2	Korean Cabbage, Head	0.07	Rice	0.05
Barley	0.2	Korean Melon	0.1	Rye	0.2
Broad Bean	0.2	Lettuce(Head)	0.2	Sesame Seed	0.05
Buckwheat	0.2	Lettuce(Leaf)	0.2	Sorghum	0.2
Butterbur	0.05	Millet	0.2	Soy Bean	0.2
Cabbage	0.2	Mung Bean	0.2	Spinach	0.2
Carrot	0.2	Oak Mushroom	0.2	Squash	0.2
Celery	0.2	Oat	0.2	Strawberry	0.05
Chieves	0.2	Onion	0.2	Sunflower Seed	0.1
Chinese Matrimony Vine	0.05	Other Beans	0.2	Sweet Pepper	0.2
Corn	0.2	Other Mushrooms	0.2	Sweet Potato	0.2
Cotton Seed	0.1	Other Seeds	0.05	Taro	0.2
Crown Daisy	0.2	Other Vegetables	0.2	Tomato	0.2
Cucumber	0.2	Pea	0.2	Welsh Onion	0.2
Eggplant	0.2	Peanut	0.2	Welsh Onion(Dried)	0.7
Garlic(Green Garlic)	0.05	Pepper Leaves	0.05	Wheat	0.2
Ginger	0.2	Potato	0.2	Wild Garlic	0.05
Green & Red Pepper(Fresh)	0.05	Radish(Leaves)	0.2	Yam*	0.1
Kidney Bean	0.2	Radish(Root)	0.2		

(164) Fenvalerate

◎ Residue definition : Fenvalerate

Almond	0.2	Hop	5.0	Peach	5.0
Apricot	10.0	Kale	10.0	Peanut	0.1
Asparagus	0.5	Kidney Bean	0.5	Pecan	0.2
Avocado	1.0	Kiwifruit	5.0	Pineapple	1.0
Banana	1.0	Korean Cabbage	1.0	Plum	10.0
Barley	2.0	Korean Cabbage, Head	0.3	Pome Fruits	2.0
Broad Bean	0.5	Korean Plum	10.0	Potato	0.05
Buckwheat	2.0	Lemon	2.0	Quince	2.0
Cabbage	3.0	Lettuce(Head))	2.0	Radish(Leaves)	8.0
Carrot	0.05	Lettuce(Leaf)	2.0	Radish(Root)	0.05
Celery	2.0	Mandarin	0.2	Red Bean	0.5
Chamnamul	1.0	Mango	1.0	Rice	1.0

Cherry	2.0	Melon	0.2	Rye	2.0
Chestnut	0.2	Millet	2.0	Sesame Seed	0.5
Chicory(Endive)	1.0	Mung Bean	0.5	Sorghum	2.0
Chieves	0.5	Oak Mushroom	0.5	Soy Bean	0.05
Chwinamul	3.0	Oat	2.0	Spinach	0.5
Corn	2.0	Onion	0.5	Squash	0.5
Cotton Seed	0.2	Orange	2.0	Strawberry	1.0
Crown Daisy	0.5	Other Beans	0.5	Sunflower Seed	0.1
Cucumber	0.2	Other Citrus Fruits	2.0	Sweet Pepper	0.5
Eggplant	1.0	Other Fruits	3.0	Sweet Potato	0.05
Garlic	0.5	Other Mushrooms	0.5	Taro	0.05
Ginger	0.5	Other Nuts	0.2	Tomato	1.0
Gingko Nut	0.2	Other Seeds	0.5	Walnut	0.2
Grape	1.0	Other Vegetables	0.5	Watermelon	0.5
Grapefruit	2.0	Papaya	1.0	Welsh Onion	0.5
Green & Red Pepper(Fresh)	1.0	Pea	0.5	Wheat	2.0

(165) Fenbuconazole

◎ Residue definition : Fenbuconazole

Apple	2.0	Grape	1.0	Pear	0.5
Apricot	2.0	Green & Red Pepper(Fresh)	0.5	Pecan	0.1
Banana	0.3	Korean Melon	0.2	Persimmon	0.3
Barley	0.2	Korean Plum	2.0	Rice	0.05
Cherry	2.0	Mandarin	0.5	Strawberry	0.5
Chwinamul	3.0	Maximowiczia Chinensis*	3.0	Tomato	0.5
Cucumber	0.3	Peach	2.0	Watermelon	0.2

(166) Fenbutatin Oxide(Vendex)

◎ Residue definition : Fenbutatin oxide

Almond	0.5	Kale	2.0	Pea	0.5
Apple	5.0	Kidney Bean	0.5	Peach	7.0
Apricot	2.0	Kiwifruit	2.0	Peanut	0.5
Asparagus	2.0	Korean Cabbage, Head	2.0	Pear	5.0
Avocado	2.0	Korean Plum	5.0	Pecan	0.5
Banana	5.0	Lemon	5.0	Persimmon	2.0
Broad Bean	0.5	Lettuce(Head)	2.0	Pineapple	2.0
Cabbage	2.0	Lettuce(Leaf)	2.0	Plum	3.0
Carrot	2.0	Mandarin	5.0	Quince	5.0
Celery	2.0	Mango	2.0	Radish(Root)	2.0

Cherry	5.0	Melon	1.0	Red Bean	0.5
Chestnut	2.0	Mung Bean	0.5	Sesame Seed	2.0
Chieves	2.0	Oak Mushroom	2.0	Soy Bean	0.5
Cotton Seed	2.0	Onion	2.0	Spinach	2.0
Crown Daisy	2.0	Orange	5.0	Squash	2.0
Cucumber	2.0	Other Beans	0.5	Strawberry	3.0
Eggplant	2.0	Other Citrus Fruits	5.0	Sunflower Seed	2.0
Garlic	2.0	Other Fruits	2.0	Sweet Pepper	1.0
Ginger	2.0	Other Mushrooms	2.0	Tomato	1.0
Gingko Nut	2.0	Other Nuts	2.0	Walnut	0.5
Grape	5.0	Other Seeds	2.0	Watermelon	2.0
Grapefruit	5.0	Other Vegetables	2.0	Welsh Onion	2.0
Hop	30.0	Papaya	2.0		

(167) Fensulfothion

◎ Residue definition : Fensulfothion

Banana	0.02	Onion	0.1	Rye	0.1
Buckwheat	0.1	Peanut	0.05	Sorghum	0.1
Corn	0.1	Pineapple	0.05	Soy Bean	0.02
Cotton Seed	0.02	Potato	0.1	Sweet Potato	0.05
Millet	0.1	Radish(Root)	0.1	Tomato	0.1
Oat	0.1				

(168) Fenthion : MPP

◎ Residue definition : Fenthion

Apple	0.2	Onion	0.1	Sesame Seed	0.1
Cabbage	0.5	Pea	0.1	Soy Bean	0.1
Cherry	0.5	Pear	0.2	Strawberry	0.2
Grape	0.2	Plum	0.5	Sweet Potato	0.05
Kiwifruit	0.2	Potato	0.05	Tomato	0.1
Lettuce(Head)	0.5	Rice	0.5	Wheat	0.1
Millet	0.05				

(169) Penconazole

◎ Residue definition : Penconazole

Apple	0.2	Green & Red Pepper(Fresh)	0.3	Peach	0.1
Cucumber	0.1	Hop	0.5	Pear	0.2
Grape	0.5	Korean Melon	0.1	Persimmon	0.2

(170) Phenthoate : PAP

◎ Residue definition : Phenthoate

Apple	0.2	Cucumber	0.2	Pear	0.2
Artemisia	0.5	Korean Cabbage	0.1	Persimmon	0.2
Chestnut	0.05	Korean Cabbage, Head	0.03	Rice	0.05
Citrus Fruits	1.0	Mulberry	0.5	Sorghum	0.1
Corn	0.2	Peach	0.2	Wheat	0.2

(171) Fenpropathrin

◎ Residue definition : Fenpropathrin

Apple	5.0	Cucumber	0.2	Strawberry	0.5
Artemisia	0.3	Green & Red Pepper(Fresh)	0.5	Sweet Pepper	1.0
Cherry	5.0†	Mandarin	5.0	Tomato	1.0
Coffee Bean	0.02	Pear	5.0	Watermelon	5.0
Cotton Seed	1.0				

(172) Fentin

◎ Residue definition : Sum of fentin, triphenyltin hydroxide, triphenyltin acetate, and triphenyltin chloride, expressed

Peanut	0.05	Potato	0.1	Rice	0.05
Pecan	0.05				

(173) Phorate

◎ Residue definition : Sum of phorate, its oxygen analogue, and their sulfoxides and sulfones, expressed as phorate

Barley	0.05	Garlic	0.1	Soybean	0.05
Corn	0.05	Peanut	0.1	Tomato	0.1
Cottonseed	0.05	Potato	0.2	Wheat	0.05

(174) Formothion

◎ Residue definition : Formothion

Grapefruit	0.2	Orange	0.2	Other citrus fruits	0.2
Lemon	0.2				

(175) Phosalone

◎ Residue definition : Phosalone

Apple	5.0	Korean Cabbage, Head	2.0	Pear	2.0

Cherry	10.0	Lemon	1.0	Pecan	0.1
Chestnut	0.1	Mandarin	1.0	Plum	5.0
Grape	5.0	Orange	1.0	Potato	0.1
Grapefruit	1.0	Other Citrus Fruits	1.0	Yuja, *Citrus junos*	2.0
Green & Red	1.0	Peach	5.0		

(176) Phosmet(PMP) : Imidan

◎ Residue definition : Phosmet

Corn	0.05	Other Agricultural Products	0.05	Potato	0.05

(177) Phosphamidone

◎ Residue definition : Phosphamidon(Sum of E-Phosphamidone, Z-Phosphamidone)

Apple	0.5	Lettuce(Head)	0.1	Radish(Root)	0.05
Barley	0.1	Oat	0.1	Rye	0.1
Beans	0.2	Orange	0.4	Sorghum	0.1
Buckwheat	0.1	Other Cereal Grains	0.1	Spinach	0.2
Cabbage	0.2	Other Citrus Fruits	0.4	Strawberry	0.2
Cherry	0.2	Other Potatoes	0.05	Sweet Potato	0.05
Corn	0.1	Peach	0.2	Taro	0.05
Cucumber	0.1	Pear	0.5	Tomato	0.1
Grapefruit	0.4	Plum	0.2	Watermelon	0.1
Lemon	0.4	Potato	0.05	Wheat	0.1

(178) Phoxim

◎ Residue definition : Phoxim

Barley	0.05	Green Garlic	0.05	Potato	0.05
Buckwheat	0.05	Korean Cabbage, Head	0.1	Rice	0.05
Cabbage	0.05	Lettuce(Head)	0.1	Rye	0.05
Corn	0.05	Lettuce(Leaf)	0.1	Sorghum	0.05
Cotton Seed	0.05	Millet	0.05	Tomato	0.2
Garlic	0.1	Oat	0.05	Wheat	0.05
Green & Red Pepper(Fresh)	0.1	Onion	0.05		

(179) Folpet

◎ Residue definition : Folpet

Apple	5.0	Grapefruit	2.0	Orange	2.0
Asparagus	5.0	Green & Red Pepper(Dried)	25	Other Citrus Fruits	2.0

Avocado	2.0	Green & Red Pepper(Fresh)	5.0	Persimmon	5.0
Celery	5.0	Korean Melon	1.0	Squash	5.0
Cherry	2.0	Lemon	2.0	Strawberry	5.0
Cucumber	5.0	Lettuce(Head)	2.0	Tomato	2.0
Garlic	2.0	Melon	2.0	Watermelon	0.5
Grape	5.0	Onion	2.0	Welsh Onion	2.0

(180) Flusilazole

◎ Residue definition : Flusilazole

Cucumber	0.2	Jujube(Dried)	1.0	Rubi Fructus	0.5
Garlic	0.05	Korean Melon	0.2	Squash	0.5
Garlic(Dried)	0.2	Mandarin	0.2	Strawberry	0.5
Grape(Wild Grapes)	0.3	Melon	0.1	Sweet Pepper	1.0
Green & Red Pepper(Fresh)	1.0	Other Agricultural Products	0.05	Tomato	1.0
Green Garlic	2.0	Peach	0.5	Watermelon	0.05
Jujube	0.5	Pome Fruits	0.3		

(181) Fluvalinate

◎ Residue definition : Fluvalinate (sum of isomers)

Potato	0.01	Other Agricultural Products	0.01		

(182) Flucythrinate

◎ Residue definition : Flucythrinate (sum of isomers)

Corn	0.05	Other Agricultural Products	0.05	Potato	0.05

(183) Fluazifop-butyl

◎ Residue definition : Fluazifop-butyl

Apricot	0.05	Korean Cabbage, Head	0.7	Radish(Leaves)	0.3
Asparagus	3.0	Korean Melon	0.1	Radish(Root)	0.05
Balloon Flower	0.05	Onion	0.5	Sesame Seed	0.1
Bonnet Bellflower	0.05	Peach	0.05	Soy Bean	1.0
Carrot	2.0	Peanut	1.0	Spinach	6.0
Cherry	0.05	Pecan	0.05	Strawberry	0.2
Cotton Seed	0.1	Perilla Leaves	0.05	Sweet Potato	0.5
Garlic	0.5	Plum	0.05	Watermelon	0.3
Green & Red Pepper(Fresh)	1.0	Potato	0.05	Welsh Onion	0.2
Korean Cabbage	2.0				

(184) Prometryn

◎ Residue definition : Prometryn

Corn	0.2	Cotton seed	0.2	Other Agricultural	0.05

(185) Procymidone

◎ Residue definition : Procymidone

Apple	5.0	Green & Red Pepper(Fresh)	5.0	Peach	10.0
Cherry	5.0	Kiwifruit	7.0	Potato	0.1
Chieves	5.0	Lettuce(Head)	5.0	Rice	1.0
Coffee Bean	0.05	Lettuce(Leaf)	5.0	Strawberry	10.0
Cucumber	2.0	Mango	0.01	Sunflower Seed	2.0
Eggplant	2.0	Melon	1.0	Sweet Pepper	5.0
Grape	5.0	Onion	0.2	Tomato	5.0
Green & Red Pepper(Dried)	15	Other Agricultural Products	0.05	Watermelon	2.0

(186) Prochloraz

◎ Residue definition : Sum of prochloraz and its metabolites containing the 2,4,6 -Trichlorophenol moiety expressed

Apple	0.5	Korean Melon	0.5	Persimmon	2.0
Banana	0.05	Mandarin	1.0	Rice	0.02
Bonnet Bellflower	0.05	Mushroom	0.5	Rubi Fructus	3.0
Cherry	2.0	Onion	0.05	Strawberry	0.5
Cucumber	1.0	Other Agricultural Products	0.05	Sweet Pepper	3.0
Egg Plant	2.0	Oyster Mushroom	0.1	Tomato	2.0
Garlic	0.05	Peach	2.0	Watermelon	0.5
Grape	1.0	Pear	2.0	Welsh Onion	1.0
Green & Red Pepper(Fresh)	3.0	Perilla Leaves	50	Wild Grape	3.0
Green Garlic	2.0				

(187) Propanil

◎ Residue definition : Propanil

Barley	0.2	Rice	0.2	Wheat	0.2
Oat	0.2				

(188) Propamocarb

◎ Residue definition : Propamocarb

Cabbage	0.1	Korean Melon	1.0	Radish(Root)	5.0
Celery	0.2	Lettuce(Head)	10.0	Rice	0.1
Cucumber	2.0	Lettuce(Leaf)	10.0	Spinach	1.0
Ginger	0.05	Melon	1.0	Strawberry	0.1
Grape	2.0	Onion	1.0	Sweet Pepper	1.0
Green & Red	3.0	Other Agricultural Products	0.05	Tomato	1.0
Korean Cabbage	3.0	Peach	1.0	Watermelon	0.7
Korean Cabbage, Head	1.0	Potato	0.3		

(189) Propargite

◎ Residue definition : Propargite

Almond	0.1	Hop	30.0	Peanut	0.1
Apple	5.0	Kidney Bean	0.2	Pear	3.0
Apricot	7.0	Lemon	5.0	Plum	7.0
Corn	0.1	Mandarin	5.0	Potato	0.1
Cotton Seed	0.1	Mung Bean	0.2	Red Bean	0.2
Grape	10.0	Orange	5.0	Strawberry	7.0
Grapefruit	5.0	Peach	7.0	Walnut	0.1

(190) Profenofos

◎ Residue definition : Profenofos

Apple	2.0	Korean Cabbage	2.0	Soy Bean	0.05
Cotton Seed	3.0	Korean Cabbage, Head	0.7	Sweet Pepper	2.0
Cucumber	2.0	Potato	0.05	Tomato	2.0
Green & Red Pepper(Fresh)	2.0	Sesame Seed	3.0		

(191) Propoxur

◎ Residue definition : Propoxur

Other Agricultural	0.05	Rice	0.05

(192) Propiconazole

◎ Residue definition : Propiconazole

Almond	0.05	Green & Red Pepper(Fresh)	1.0	Pecan	0.05
Apple	1.0	Korean Plum	1.0	Plum	1.0
Apricot	1.0	Mango	0.05	Rice	0.1
Banana	0.1	Millet	1.0	Rye	0.05
Barley	0.05	Oat	0.05	Seeds	0.05

Buckwheat	1.0	Onion	0.05	Sorghum	1.0
Cherry	1.0	Peach	1.0	Welsh Onion	0.05
Corn	1.0	Peanut	0.05	Wheat	0.05†
Grape	0.5	Pear	0.5		

(193) Pyrazophos

◎ Residue definition : Pyrazophos

Apple	1.0	Cucumber	0.1	Watermelon	1.0
Barley	0.05	Korean Cabbage, Head	0.1	Wheat	0.05
Carrot	0.2				

(194) Pyrethrins

◎ Residue definition : Sum of pyrethrins I and II, cinerins I and II and jasmolins I and II

Almond	1.0	Kidney Bean	1.0	Peanut	1.0
Apple	1.0	Kiwifruit	1.0	Pear	1.0
Apricot	1.0	Korean Cabbage, Head	1.0	Pecan	1.0
Asparagus	1.0	Korean Plum	1.0	Persimmon	1.0
Avocado	1.0	Lemon	1.0	Pineapple	1.0
Banana	1.0	Lettuce(Head)	1.0	Plum	1.0
Barley	3.0	Lettuce(Leaf)	1.0	Quince	1.0
Broad Bean	1.0	Mandarin	1.0	Radish(Leaves)	1.0
Buckwheat	3.0	Mango	1.0	Radish(Root)	1.0
Cabbage	1.0	Melon	1.0	Red Bean	1.0
Carrot	1.0	Millet	3.0	Rice	3.0
Celery	1.0	Mung Bean	1.0	Rye	3.0
Cherry	1.0	Oak Mushroom	1.0	Sesame Seed	1.0
Chestnut	1.0	Oat	3.0	Sorghum	3.0
Chieves	1.0	Onion	1.0	Soy Bean	1.0
Corn	3.0	Orange	1.0	Spinach	1.0
Cotton Seed	1.0	Other Beans	1.0	Strawberry	1.0
Crown Daisy	1.0	Other Citrus Fruits	1.0	Sunflower Seed	1.0
Cucumber	1.0	Other Fruits	1.0	Sweet Pepper	1.0
Eggplant	1.0	Other Mushrooms	1.0	Taro	1.0
Garlic	1.0	Other Nuts	1.0	Tomato	1.0
Ginger	1.0	Other Seeds	1.0	Walnut	1.0
Gingko Nut	1.0	Other Vegetables	1.0	Watermelon	1.0
Grape	1.0	Papaya	1.0	Welsh Onion	1.0
Grapefruit	1.0	Pea	1.0	Wheat	3.0
Kale	1.0	Peach	1.0		

(195) Pirimicarb

◎ Residue definition : Pirimicarb

Almond	1.0	Green & Red Pepper(Fresh)	2.0	Pear	1.0
Apple	1.0	Kale	2.0	Pecan	0.05
Apricot	1.0	Kiwifruit	1.0	Persimmon	1.0
Asparagus	2.0	Korean Cabbage, Head	2.0	Pineapple	1.0
Avocado	1.0	Korean Melon	1.0	Plum	0.5
Banana	1.0	Korean Plum	1.0	Potato	0.05
Barley	0.05	Lemon	0.05	Quince	1.0
Buckwheat	0.05	Lettuce(Head)	1.0	Radish(Leaves)	2.0
Cabbage	1.0	Lettuce(Leaf)	1.0	Radish(Root)	0.05
Carrot	2.0	Mandarin	0.05	Rice	0.05
Celery	1.0	Mango	1.0	Rye	0.05
Cherry	1.0	Melon	1.0	Sesame Seed	1.0
Chestnut	1.0	Millet	0.05	Sorghum	0.05
Chieves	0.5	Oak Mushroom	2.0	Spinach	1.0
Coffee Bean	0.05	Oat	0.05	Squash	2.0
Corn	0.05	Onion	0.5	Strawberry	0.5
Cotton Seed	0.05	Orange	0.5	Sunflower Seed	1.0
Crown Daisy	2.0	Other Citrus Fruits	0.05	Sweet Pepper	1.0
Cucumber	1.0	Other Fruits	1.0	Sweet Potato	0.1
Eggplant	1.0	Other Mushrooms	2.0	Taro	0.1
Garlic	2.0	Other Nuts	1.0	Tomato	1.0
Ginger	2.0	Other Seeds	1.0	Walnut	1.0
Gingko Nut	1.0	Other Vegetables	2.0	Watermelon	1.0
Grape	1.0	Papaya	1.0	Welsh Onion	0.5
Grapefruit	0.05	Peach	0.5	Wheat	0.05

(196) Pirimiphos-methyl

◎ Residue definition : Pirimiphos-methyl

Apple	2.0	Korean Cabbage (Head)	0.7	Plum	1.0
Barley	5.0	Lemon	1.0	Potato	0.05
Buckwheat	5.0	Lettuce(Head)	2.0	Rice	1.0
Cabbage	1.0	Mushrooms	1.0	Rye	5.0
Carrot	0.5	Oat	5.0	Sorghum	5.0
Cherry	1.0	Onion	1.0	Spinach	5.0
Corn	5.0	Orange	1.0	Strawberry	1.0
Cucumber	0.5	Other Cereal Grains	5.0	Sweet Pepper	1.0
Grapefruit	1.0	Other Citrus Fruits	1.0	Tomato	1.0
Green & Red	0.5	Pea	0.05	Welsh Onion	0.5

Kiwifruit	2.0	Peanut	1.0	Wheat	5.0
Korean Cabbage	2.0	Pear	1.0		

(197) Pirimiphos-ethyl

◎ Residue definition : Pirimiphos-ethyl

Banana	0.02	Peanut	0.1	Potato	0.1
Garlic	0.1				

(198) Piperonylbutoxide

◎ Residue definition : Piperonyl butoxide

Almond	8.0	Dried fruits	0.2	Other Agricultural	0.05

(199) Hexazinone

◎ Residue definition : Hexazinone

Pineapple	0.5

(200) Hexaconazole

◎ Residue definition : Hexaconazole

Barley	0.2	Mandarin	0.1	Rice	0.3
Bonnet Bellflower	0.05	Maximowiczia Chinensis	1.0	Soy Bean	0.5
Chwinamul	1.0	Melon	0.05	Squash	0.3
Cucumber	0.05	Mulberry	0.05	Strawberry	0.3
Eggplant	0.05	Onion	0.05	Sweet Pepper	0.3
Garlic(Green Garlic)	0.5	Peach	0.5	Watermelon	0.2
Grape	0.1	Peanut	0.05	Welsh Onion	0.1
Green & Red	0.3	Pome Fruits	0.5	Wild Garlic	0.5
Korean Melon	0.1				

(201) Hexythiazox

◎ Residue definition : Hexythiazox

Apple	0.3	Green Garlic	0.05	Pear	0.3
Garlic	0.05	Mandarin	0.5	Strawberry	1.0
Green & Red Pepper(Fresh)	2.0	Melon	0.5	Tea	20.0

(202) Heptachlor : Sum of heptachlor and heptachlor epoxide

◎ Residue definition : Sum of heptachlor and heptachlor epoxide, expressed as heptachlor

Cereal Grains	0.02	Cotton Seed	0.02	Pineapple	0.01
Citrus Fruits	0.01	Other Agricultural Products	0.01	Soy Bean	0.02

(203) Benfuracarb

◎ Residue definition : Sum of carbofuan and 3-hydroxycarbofuran, exprassed as carbofuran

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (114) Carbofurar

(204) Isoprothiolane

◎ Residue definition : Isoprothiolane

Apple	0.05	Onion	0.2	Rice	0.5
Garlic	0.2				

(205) Iprobenfos

◎ Residue definition : Iprobenfos

Rice	0.2

(206) Chlorfenapyr

◎ Residue definition : Chlorfenapyr

Apricot	1.0	Green & Red Pepper(Fresh)	0.7	Pome Fruits	1.0
Bonnet Bellflower	0.1	Jujube*	2.0	Potato	0.05
Chamnamul	20	Korean Cabbage	0.5	Rubi Fructus	0.5
Cherry	1.0	Korean Cabbage(Died)	3.0	Rubi Fructus(Dried)	2.0
Chieves	3.0	Korean Cabbage, Head	0.2	Spinach	10
Chinese Matrimony	2.0	Korean Cabbage,	1.0	Strawberry	0.5
Chwinamul	3.0	Korean Melon	0.5	Sweet Pepper	0.7
Corn	0.05	Lettuce(Leaf)	5.0	Tea**	3.0
Crown Daisy	2.0	Mandarin	1.0	Tomato	0.5
Cucumber	0.5	Melon	0.5	Watermelon	0.1
Eggplant	0.5	Peach	1.0	Welsh Onion	1.0
Fig	0.5	Pepper Leaves	7.0	Welsh Onion(Dried)	0.5
Grape	2.0	Perilla Leaves	7.0	Yuja, *Citrus junos*	2.0
Green & Red Pepper(Dried)	5.0				

(207) Tebufenozide

◎ Residue definition : Tebufenozide

Cucumber	0.7	Mandarin	1.0	Spinach	1.0
Green & Red	0.5	Other Agricultural Products	0.05	Tomato	1.0
Korean Cabbage	1.0	Peach	1.0	Watermelon	0.1
Korean Cabbage, Head	0.3	Pome Fruits	1.0	Welsh Onion	2.0
Korean Cabbage,	3.0	Rice	0.3		

(208) Tebufenpyrad

◎ Residue definition : Tebufenpyrad

Apple	0.5	Korean Melon	0.1	Shinsuncho	1.0
Bonnet Bellflower	0.05	Mandarin	0.5	Strawberry	0.5
Grape	0.5	Pear	0.5	Sweet Pepper	0.5
Green & Red Pepper(Fresh)	0.5	Pepper Leaves	2.0	Tea	2.0
Green Tea Extract	3.0	Perilla Leaves	5.0	Watermelon	0.1

(209) Teflubenzuron

◎ Residue definition : Teflubenzuron

Apricot	0.3	Korean Cabbage	1.0	Perilla Leaves	5.0
Broccoli	1.0	Korean Cabbage(Dried)	0.4	Pome Fruits	1.0
Cherry	0.05	Korean Cabbage, Head	0.1	Rubi Fructus	2.0
Chestnut	0.05	Korean Cabbage,	0.2	Strawberry	1.0
Cucumber	0.2	Mandarin	0.7	Tomato	0.2
Green & Red Pepper(Fresh)	0.2	Mushrooms	0.05	Watermelon	0.2
Jujube*	1.0	Peach	1.0	Welsh Onion	0.5

(210) Fenazaquin

◎ Residue definition : Fenazaquin

Apple	0.1	Mandarin	0.7	Shinsuncho	3.0
Bud of Aralia	0.1	Pear	0.3	Strawberry	0.7
Eggplant	0.2	Perilla Leaves	3.0	Watermelon	0.05
Grape	0.5				

(211) Prothiofos

◎ Residue definition : Prothiofos

Apple	0.05	Mandarin	0.2	Persimmon	0.2
Korean Cabbage, Head	0.05	Pear	0.05	Yuja, *Citrus junos*	0.05
Korean Cabbage,	0.7				

(212) Flufenoxuron

◎ Residue definition : Flufenoxuron

Apple	0.7	Jujube	0.5	Pepper Leaves	3.0
Apricot	2.0	Jujube(Dried)	1.0	Perilla Leaves	2.0
Balloon Flower	0.2	Korean Cabbage	0.5	Persimmon	0.5
Cherry	1.0	Korean Cabbage, Head	0.2	Potato	0.05
Corn	0.05	Korean Cabbage,	2.0	Strawberry	0.3
Crown Daisy	5.0	Korean Melon	0.7	Sweet Pepper	1.0
Cucumber	0.5	Mandarin	1.0	Tea	10.0
Green & Red Pepper(Fresh)	1.0	Peach	1.0	Watermelon	0.05
Green Tea Extract	35.0	Pear	0.7	Welsh Onion	0.5

(213) Pyraclofos

◎ Residue definition : Pyraclofos

Cabbage	0.1	Green & Red Pepper(Fresh)	1.0	Pepper Leaves	3.0
Chieves	2.0	Green Tea Extract	15.0	Sweet Pepper	1.0
Garlic	0.05	Korean Cabbage	0.1	Tea	5.0
Green & Red Pepper(Dried)	5.0	Korean Cabbage, Head	0.05	Watermelon	0.05

(214) Pyridaben

◎ Residue definition : Pyridaben

Eggplant	1.0	Pear	0.5	Korean Melon	1.0
Mandarin	2.0	Peach	1.0	Tomato	1.0
Green & Red Pepper(Fresh)	5.0	Apple	1.0	Sweet Pepper	3.0
Pepper Leaves	2.0	Watermelon	0.05	Squash	0.5
Strawberry	1.0	Cucumber	1.0	Pumpkin Young Leaves	20
Melon	1.0	Grape	2.0		

(215) Fipronil

◎ Residue definition : Fipronil

Cucumber	0.1	Potato	0.01	Watermelon	0.01
Mandarin	0.05	Rice	0.01		

(216) Fenobucarb

◎ Residue definition : Fenobucarb

Rice	0.5

(217) Dimethylvinphos

◎ Residue definition : Sum of E and Z isomers of Dimethylvinphos

Korean Cabbage, Head	0.05	Rice	0.1	Tomato	0.1

(218) Dimethomorph

◎ Residue definition : Sum of E and Z isomers of Dimethomorph

Chard	30	Korean Cabbage(Dried)	7.0	Sesame Seed	0.5
Crown Daisy	20	Korean Cabbage, Head	0.7	Spinach	20
Cucumber	0.3	Korean Cabbage,	2.5	Strawberry	2.0
Fig	3.0	Korean Melon	0.5	Sweet Pepper	0.5
Garlic	0.05	Lettuce(Leaf)	20	Tomato	5.0
Ginger	0.5	Melon	0.7	Watermelon	0.1
Grape(Wild Grapes)	2.0	Onion	0.2	Welsh Onion	3.0
Green & Red Pepper(Fresh)	0.5	Perilla Leaves	20	Welsh Onion(Dried)	15
Korean Cabbage	2.0	Potato	0.1		

(219) Diafenthiuron

◎ Residue definition : Diafenthiuron

Apple	0.5	Mandarin	0.5	Welsh onion	0.5
Cucumber	2.0	Pear	0.2		

(220) Diethofencarb

◎ Residue definition : Diethofencarb

Chamnamul	5.0	Lettuce(Leaf)	5.0	Rape(Leaves)	0.05
Crown Daisy	30	Mandarin	0.5	Rape(Seeds)	0.05
Cucumber	0.5	Other Agricultural Products	0.05	Sedum	20
Eggplant	1.0	Peach	0.3	Strawberry	5.0
Grape	2.0	Pepper Leaves	2.0	Sweet Pepper	5.0
Green & Red Pepper(Dried)	3.0	Perilla Leaves	10	Tomato	3.0
Green & Red Pepper(Fresh)	1.0	Plum	0.5	Welsh Onion	10

(221) Dithianon

◎ Residue definition : Dithianon

Apple	5.0	Korean Cabbage, Head	0.05	Potato	0.1
Cucumber	0.3	Korean Plum	5.0	Rice	0.1
Garlic	0.1	Mandarin	3.0	Rubi Fructus	3.0
Grape(Wild Grapes)	3.0	Onion	0.1	Sesame Seed	0.5
Green & Red Pepper(Fresh)	2.0	Peach	5.0	Soy Bean	0.05

Green Garlic	5.0	Pear	1.0	Strawberry	0.05
Green Soy Bean	0.5	Pepper Leaves	3.0	Sweet Pepper	2.0
Jujube	1.0	Persimmon	3.0	Tomato	2.0
Jujube(Dried)	1.0	Pomegranate	2.0	Watermelon	0.3
Korean Cabbage	0.1				

(222) Mepanipyrim

◎ Residue definition : Mepanipyrim

Apple	0.5	Grape	5.0	Other Agricultural Product	0.05
Chamnamul	1.0	Green & Red Pepper(Fresh)	0.5	Pear	0.5
Cucumber	1.0	Korean Melon	0.3	Strawberry	3.0
Eggplant	3.0	Lettuce(Head)	3.0	Tomato	5.0

(223) Bensultap

◎ Residue definition : Nereistoxin

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (116) Cartap.

(224) Cymoxanil

◎ Residue definition : Cymoxanil

Chard	2.0	Korean Melon	0.1	Spinach	2.0
Cucumber	0.3	Melon	0.5	Strawberry	0.5
Grape(Wild Grapes)	0.5	Onion	0.1	Sweet Pepper	0.1
Green & Red Pepper(Fresh)	0.5	Pepper Leaves	3.0	Tomato	0.5
Korean Cabbage	0.5	Potato	0.1	Watermelon	0.1
Korean Cabbage, Head	0.2	Sesame Seed	0.2	Welsh Onion	0.1
Korean Cabbage,	3.0				

(225) Cyprodinil

◎ Residue definition : Cyprodinil

Apple	1.0	Mandarin	1.0	Persimmon	1.0
Grape	5.0	Peach	1.0	Strawberry	1.0
Kiwifruit	3.0	Pear	1.0		

(226) Cyproconazole

◎ Residue definition : Cyproconazole

Apple	0.1	Persimmon	0.2	Soy Bean	0.05
Pear	0.1				

(227) Acetamiprid

◎ Residue definition : Acetamiprid

Artemisia	0.2	Kiwifruit	0.5	Pumpkin Young Leaves	10
Bi-reum	10	Korean Cabbage	3.0	Rape(Leaves)	0.7
Blueberry	0.5	Korean Cabbage(Dried)	10	Rape(Seeds)	0.5
Bonnet Bellflower	0.2	Korean Cabbage, Head	1.0	Rice	0.3
Broccoli	1.0	Korean Cabbage,	3.0	Rubi Fructus	1.0
Chard	7.0	Korean Melon	0.5	Sedum	20
Cherry	0.2	Korean Plum	1.0	Soy Bean	1.0
Crown Daisy	10	Mandarin	0.5	Squash	0.5
Cucumber	0.7	Maximowiczia	2.0	Strawberry	1.0
Eggplant	0.5	Peach	0.3	Sweet Pepper	5.0
Fig	0.3	Perilla Leaves	10	Tea	3.0
Grape	1.0	Plum	0.1	Tomato	2.0
Green & Red Pepper(Dried)	10.0	Pome Fruits	0.3	Watermelon	0.1
Green & Red Pepper(Fresh)	2.0	Potato	0.1	Welsh Onion	0.7

(228) Azoxystrobin

◎ Residue definition : Azoxystrobin

Balloon Flower	0.1	Green Soy Bean	0.5	Rubi Fructus	3.0
Bonnet Bellflower	0.1	Kiwifruit	1.0	Sesame Seed	0.1
Burdock Leaves	2.0	Korean Melon	0.2	Soybean	0.5†
Chard	50	Lettuce(Leaf)	20	Spinach	20
Chinese Matrimony	10	Lemon	10†	Squash	0.1
Chwinamul	3.0	Mandarin	1.0	Stone Fruits/Jujube(Dried)	2.0
Corn	0.02†	Maximowiczia	2.0	Strawberry	1.0
Crown Daisy	30	Onion	0.1	Sweet Pepper	2.0
Cucumber	0.5	Orange	5.0†	Tea**	1.0
Eggplant	0.7	Other Agricultural Products	0.05	Tomato	1.0
Fig	2.0	Pepper Leaves	5.0	Water Dropwort	5.0
Garlic	0.1	Perilla Leaves	20	Watermelon	0.2
Grape(Wild Grapes)	3.0	Pome Fruits	1.0	Welsh Onion	2.0
Grapefruit	7.0†	Potato	0.1	Welsh Onion(Dried)	7.0
Green & Red Pepper(Dried)	7.0	Rice	1.0	Yam*	0.1
Green & Red Pepper(Fresh)	2.0				

(229) Carpropamide

◎ Residue definition : Carpropamide

Other agricultural products	0.05	Rice	1.0		

(230) Kresoxim-methyl

◎ Residue definition : Kresoxim-methyl

Bonnet Bellflower	0.05	Korean Cabbage	0.1	Pome Fruits	2.0
Chwinamul	30	Korean Cabbage, Head	0.03	Rubi Fructus	2.0
Cucumber	0.5	Korean Melon	1.0	Squash	0.5
Garlic	0.3	Korean Plum	2.0	Strawberry	1.0
Grape(Wild Grapes)	5.0	Lettuce(Leaf)	20	Sweet Pepper	2.0
Green & Red Pepper(Dried)	10	Mandarin	2.0	Tomato	3.0
Green & Red Pepper(Fresh)	2.0	Onion	0.1	Watermelon	0.2
Green Garlic	1.0	Peach	1.0	Welsh Onion	2.0
Jujube*	2.0	Plum	1.0		

(231) Chlorfluazuron

◎ Residue definition : Chlorfluazuron

Apple	0.2	Peach	0.5	Soy Bean	0.1
Cabbage	0.1	Pear	0.1	Spinach	1.0
Chestnut	0.05	Perilla Leaves	2.0	Strawberry	0.3
Crown Daisy	5.0	Persimmon	0.5	Sweet Pepper	0.5
Green & Red Pepper(Fresh)	0.5	Pine Nut	0.01	Tea**	10.0
Korean Cabbage	1.0	Red Bean	0.05	Water Dropwort	1.0
Korean Cabbage, Head	0.3	Rubi Fructus	1.0	Watermelon	0.3
Mandarin	0.2	Sorghum	1.0	Welsh Onion	0.3

(232) Tricyclazole

◎ Residue definition : Tricyclazole

Green & Red Pepper(Fresh)	3.0	Rice	0.7	Watermelon	0.2
Other Agricultural Products	0.05				

(233) Pencycuron

◎ Residue definition : Pencycuron

Garlic	0.1	Other agricultural products	0.1	Strawberry	2.0
Green Garlic	0.05	Rice	0.3		

(234) Fenpyroximate

◎ Residue definition : Fenpyroximate

Apple	0.5	Mandarin	0.5	Rubi Fructus	0.7
Balloon Flower	0.1	Other Agricultural Products	0.05	Strawberry	0.5
Green Tea Extract	20.0	Pear	0.5	Tea	10.0
Korean Melon	0.1	Perilla Leaves	7.0		

(235) Fosthiazate

◎ Residue definition : Fosthiazate

Cucumber	0.5	Korean Melon	0.5	Sweet Pepper	0.05
Garlic	0.1	Melon	0.1	Tomato	0.05
Green & Red Pepper(Fresh)	0.05	Rubi Fructus	0.05	Watermelon	0.1
Kiwifruit	0.05	Strawberry	0.05		

(236) Pyriproxyfen

◎ Residue definition : Pyriproxyfen

Cucumber	0.2	Green & red pepper, fresh	0.7	Tomato	2.0
Eggplant	1.0	Sweet pepper	0.7		

(237) Pymetrozine

◎ Residue definition : Pymetrozine

Barley	0.05	Crown Daisy	0.7	Mustard Green	3.0
Bonnet Bellflower	1.0	Cucumber	0.2	Pepper Leaves	1.0
Broccoli	1.0	Eggplant	0.2	Perilla Leaves	0.5
Butterbur	0.5	Fig	0.5	Potato	0.2
Chamnamul	0.7	Green & Red Pepper(Fresh)	1.0	Rape(Seeds)	0.05
Chard	1.0	Korean Plum	0.5	Rice	0.05
Cherry	1.0	Leaf	1.0	Sweet Pepper	1.0
Chicory(Endive)	1.0	Marsh Mallow	1.0	Watermelon	0.03
Chwinamul	1.0				

(238) Fludioxonil

◎ Residue definition : Fludioxonil

Bi-reum	20	Korean Melon	0.5	Pineapple	20†
Cherry	4.0†	Lemon	5.0†	Potato	0.02
Chieves	0.5	Lettuce(Leaf)	15	Rape(Leaves)	0.05
Crown Daisy	5.0	Mandarin	1.0	Rape(Seeds)	0.05
Cucumber	0.3	Onion	0.05	Rice	0.02
Eggplant	0.3	Orange	5.0†	Strawberry	2.0
Garlic	0.05	Other Agricultural Products	0.05	Sweet Pepper	0.5
Grape	5.0	Peach	1.0	Tomato	1.0
Grapefruit	10†	Pepper Leaves	3.0	Watermelon	0.2
Green & Red Pepper(Fresh)	0.3	Perilla Leaves	40	Welsh Onion	7.0
Kiwifruit	1.0				

(239) Fluazinam

◎ Residue definition : Fluazinam

Apple	0.3	Korean Cabbage, Head	0.05	Sesame Seed	0.05
Chinese Matrimony Vine(Dried)	15	Mandarin	0.7	Strawberry	5.0
Cucumber	0.05	Onion	0.05	Sweet Pepper	0.3
Grape	0.05	Peach	1.0	Tea**	7.0
Green & Red Pepper(Fresh)	1.0	Pear	0.3	Welsh Onion	3.0
Jujube	1.0	Persimmon	0.7	Welsh Onion(Dried)	10.0
Jujube(Dried)	2.0	Plum	0.5	Yuja, *Citrus junos*	0.5
Korean Cabbage	0.05	Potato	0.05		

(240) Fenoxycarb

◎ Residue definition : Fenoxycarb

Apple	0.5	Persimmon	0.5

(241) Nuarimol

◎ Residue definition : Nuarimol

Apple	0.1	Melon	0.1	Persimmon	0.3
Korean melon	0.2	Pear	0.1	Welsh onion	0.1

(242) Lufenuron

◎ Residue definition : Lufenuron

Apple	0.3	Korean Cabbage, Head	0.07	Pomegranate	0.5
Cabbage	0.2	Korean Cabbage,	3.0	Rape(Leaves)	0.2
Chard	10	Mandarin	0.5	Rape(Seeds)	0.3
Cucumber	0.2	Parsley	2.0	Rubi Fructus	0.3
Green & Red Pepper(Dried)	2.0	Peach	0.5	Squash	0.5
Green & Red Pepper(Fresh)	0.5	Pear	0.5	Strawberry	0.5
Grlic(Green Garlic)	0.3	Perilla Leaves	7.0	Sweet Pepper	0.5
Jujube/Jujube(Dried)	2.0	Persimmon	0.5	Welsh Onion	0.2
Kale	2.0	Plum	0.05	Welsh Onion(Dried)	0.3
Korean Cabbage	0.2				

(243) Methabenzthiazuron

◎ Residue definition : Methabenzthiazuron

Garlic	0.1	Green Garlic	0.05

(244) Mepronil

◎ Residue definition : Mepronil

Potato	0.05

(245) Benfuresate

◎ Residue definition : Benfuresate

Rice	0.1

(246) Spinosad

◎ Residue definition : Sum of spinosyn A and spinosyn D

Apple	0.05	Green & Red Pepper(Fresh)	0.5	Rubi Fructus	0.5
Barley	1.0†	Korean Cabbage, Head	0.5	Sorghum	1.0†
Beat	0.5	Korean Melon	0.3	Squash	0.1
Blueberry	1.0	Leafy Vegetable	5.0	Strawberry	1.0
Celery	1.0	Mandarin	0.3	Sweet Pepper	0.5
Cherry	0.2†	Melon	0.1	Tea	0.1
Chieves	1.0	Oat	1.0†	Tomato	1.0
Corn	1.0†	Plum	0.02†	Watermelon	0.1
Cucumber	0.3	Potato	0.1	Welsh Onion	0.7
Eggplant	0.5	Rape(Leaves)	0.05	Wheat	1.0†
Fig	1.0	Rape(Seeds)	0.05	Wild Grape	0.05
Grape	0.5	Rice	0.05		

(247) Silafluofen

◎ Residue definition : Silafluofen

Persimmon	1.0	Rice	0.1	Welsh onion	0.3

(248) Abamectin

◎ Residue definition : Sum of residues of avermectin B1a, avermectin B1b

Apple	0.02	Green & Red Pepper(Fresh)	0.2	Spinach	0.05
Celery	0.05	Green Garlic	0.05	Squash	0.01
Chwinamul	0.7	Korean Melon	0.1	Strawberry	0.1
Crown Daisy	0.05	Korean Plum	0.05	Sweet Pepper	0.2
Cucumber	0.01	Mandarin	0.02	Tomato	0.01
Eggplant	0.02	Peach	0.1	Watermelon	0.01
Fig	0.05	Pear	0.02	Welsh Onion	0.1
Garlic	0.05	Persimmon	0.05		

(249) Emamectin benzoate

◎ Residue definition : Sum of emamectin benzoate B1a and B1b, expressed as emamectin benzoate

Almond	0.01†	Kale	0.1	pomegranate	0.05
Apple	0.2	Korean Cabbage	0.05	Potato	0.05
Bi-reum	1.0	Korean Cabbage, Head	0.02	Rape(Leaves)	0.05
Blueberry	0.05	Korean Melon	0.05	Rape(Seeds)	0.05
Broccoli	0.1	Lettuce(Leaf)	0.1	Rubi Fructus	0.03
Cabbage	0.1	Melon	0.05	Spinach	0.05
Chinese Matrimony Vine (Dried)	0.1	Mustard Leaf	0.05	Strawberry	0.05
Chwinamul	0.2	Parsley	0.1	Sweet Pepper	0.05
Cucumber	0.05	Peach	0.2	Tomato	0.05
Eggplant	0.05	Pecan	0.01†	Watermelon	0.1
Fig	0.05	Perilla Leaves	0.05	Welsh Onion	0.05
Green & Red Pepper(Fresh)	0.05				

(250) Esprocarb

◎ Residue definition : Esprocarb

Rice	0.1

(251) Etoxazole

◎ Residue definition : Etoxazole

Apple	0.5	Korean Melon	0.3	Persimmon	0.1
Balloon Flower	0.1	Mandarin	1.0	Strawberry	0.5
Chieves	3.0	Melon	0.5	Sweet Pepper	0.3
Fig	0.3	Peach	0.2	Watermelon	0.1
Grape	0.5	Pear	0.5	Yuja, *Citrus junos*	1.0
Green & Red Pepper(Fresh)	0.3				

(252) Oryzalin

◎ Residue definition : Oryzalin

Apple	0.05

(253) Imibenconazole

◎ Residue definition : Imibenconazole

Apple	0.3	Jujube*	2.0	Peach	0.3
Grape	0.2	Mandarin	1.0	Tea	0.2

(254) Carbosulfan

◎ Residue definition : Sum of carbofuran and 3-hydroxycarbofuran, exprassed as carbofuran

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (114) Carbofurar

(255) Famoxadone

◎ Residue definition : Famoxadone

Cucumber	0.3	Korean Melon	0.5	Sesame Seed	0.1
Grape	2.0	Melon	0.5	Sweet Pepper	5.0
Green & Red Pepper(Fresh)	5.0	Onion	0.1	Tomato	2.0
Korean Cabbage	1.0	Pear	0.5	Welsh Onion	2.0
Korean Cabbage, Head	0.3	Potato	0.1	Wild Grape	5.0

(256) Fluoroimide

◎ Residue definition : Fluoroimide

Persimmon	0.5	Potato	0.1

(257) Fluquinconazole

◎ Residue definition : Fluquinconazole

Bonnet Bellflower	0.2	Korean Melon	0.5	Squash	0.5
Chard	20	Lettuce(Head)	1.0	Strawberry	0.5
Cucumber	1.0	Mandarin	2.0	Sweet Pepper	2.0
Garlic	0.1	Maximowiczia Chinensis*	3.0	Tomato	0.7
Grape	1.0	Onion	0.2	Watermelon	0.3
Green & Red Pepper(Fresh)	2.0	Peach	1.0	Welsh Onion	0.3
Green Garlic	2.0	Pome Fruits	0.5	Wild Garlic	3.0
Jujube*	2.0	Rubi Fructus	1.0	Wild Grape	3.0

(258) Pyridaphenthion

◎ Residue definition : Pyridaphenthion

Apple	0.1	Cucumber	0.2	Persimmon	0.2
Chinese Matrimony Vine	0.2	Peach	0.3	Rice	0.2
Chinese Matrimony	0.5	Pear	0.3		

(259) Pyrimethanil

◎ Residue definition : Pyrimethanil

Apple	2.0	Jujube	1.0	Other Agricultural Product	0.05
Balloon Flower	0.2	Jujube(Dried)	2.0	Peach	4.0
Chard	30	Korean Cabbage, Head	0.2	Pear	3.0
Cherry	4.0†	Korean Melon	0.3	Perilla Leaves	10
Cucumber	2.0	Lemon	7.0†	Persimmon	2.0
Eggplant	2.0	Lettuce(Head)	3.0	Plum	2.0
Garlic	0.1	Mandarin	1.0	Strawberry	2.0
Grape	5.0	Maximowiczia Chinensis*	3.0	Tomato	1.0
Grapefruit	7.0†	Onion	0.1	Welsh Onion	3.0
Green & Red Pepper(Fresh)	1.0	Orange	7.0†	Welsh Onion(Dried)	7.0

(260) Halfenprox

◎ Residue definition : Halfenprox

Mandarin	1.0

(261) Haloxyfop : Sum of haloxyfop-methyl & haloxyfop

◎ Residue definition : Haloxyfop

Balloon flower	0.1	Korean melon	0.1	Soybean	0.05
Garlic	0.05	Onion	0.05	Welsh onion	0.05

(262) Hexaflumuron

◎ Residue definition : Hexaflumuron

Apple	0.5	Mandarin	0.7	Welsh onion	0.5
Korean Cabbage, Head	0.3	Tea	5.0		

(263) Fenothiocarb

◎ Residue definition : Fenothiocarb

Mandarin	1.0

(264) Daimuron, Dymron

◎ Residue definition : Daimuron

Rice	0.05

(265) Dimethenamid

◎ Residue definition : Dimethenamid (Sum of isomers)

Cabbage	0.07	Ginger	0.2	Potato	0.1
Corn	0.1	Green & Red Pepper(Fresh)	0.05	Soy Bean	0.01
Garlic(Green Garlic)	0.05	Onion	0.05	Sweet Pepper	0.05

(266) Dithiopyr

◎ Residue definition : Dithiopyr

Rice	0.05

(267) Dichlorprop

◎ Residue definition : Dichlorprop

Apple	0.05

(268) Dimethametryn

◎ Residue definition : Dimethametryn

Rice	0.1

(269) Metolcarb

◎ Residue definition : Metolcarb

Rice	0.05

(270) Mefenacet

◎ Residue definition : Mefenacet

Rice	0.01

(271) Mepiquat chloride

◎ Residue definition : Mepiquat chloride

Grape (Wild grapes)	0.5

(272) Molinate

◎ Residue definition : Molinate

Rice	0.05

(273) Milbemectin

◎ Residue definition : Sum of milbemycin MA_3 and milbemycin MA_4

Apple	0.1	Green Tea Extract	2.0	Pepper Leaves	1.0
Balloon Flower	0.2	Korean Melon	0.05	Rubi Fructus	0.05
Bud of Aralia	0.1	Mandarin	0.2	Strawberry	0.2
Eggplant	0.1	Melon	0.05	Tea	0.5
Green & Red Pepper(Fresh)	0.1	Pear	0.1	Watermelon	0.05

(274) Benzoximate

◎ Residue definition : Benzoximate

Apple	0.5	Mandarin	0.5

(275) Butachlor

◎ Residue definition : Butachlor

Barley	0.1	Rice	0.1	Wheat	0.1

(276) Bispyribac-sodium

◎ Residue definition : Bispyribac-sodium

Rice	0.1

(277) Cyclosulfamuron

◎ Residue definition : Cyclosulfamuron

Rice	0.1

(278) Cycloprothrin

◎ Residue definition : Cycloprothrin

Rice	0.05

(279) Cyhalofop-butyl

◎ Residue definition : Cyhalofop-butyl

Rice	0.1

(280) Cinosulfuron

◎ Residue definition : Cinosulfuron

Rice	0.05

(281) Simetryn

◎ Residue definition : Simetryn

Rice	0.05

(282) Anilofos

◎ Residue definition : Anilofos

Rice	0.05

(283) Acibenzolar-S-methyl

◎ Residue definition : Sum of acybenzolar-S-methyl and acibenzolar acid, expressed as acybenzolar-S-methyl

Apple	0.2	Peach	0.2	Rice	0.3
Grape	2.0	Pepper Leaves	2.0	Sweet Pepper	1.0
Green & Red Pepper(Fresh)	1.0	Persimmon	0.3	Watermelon	0.3
Mandarin	0.2				

(284) Azimsulfuron

◎ Residue definition : Azimsulfuron

Rice	0.1

(285) Acrinathrin

◎ Residue definition : Acrinathrin

Apple	0.5	Mandarin	1.0	Tomato	0.5
Cucumber	0.5	Peach	0.2	Watermelon	0.1
Green & Red Pepper(Fresh)	1.0	Strawberry	1.0	Welsh Onion	1.0
Korean Melon	0.3	Sweet Pepper	1.0		

(286) Etridiazole

◎ Residue definition : Etridiazole

Cucumber	0.2	Rice	0.05	Tomato	0.5
Green & Red pepper, fresh	0.05	Sweet pepper	0.05		

(287) Inabenfide

◎ Residue definition : Inabenfide

Rice	0.05

(288) Imazosulfuron

◎ Residue definition : Imazosulfuron

Rice	0.1

(289) Isazofos

◎ Residue definition : Isazofos

Garlic	0.01

(290) Indoxacarb

◎ Residue definition : Indoxacarb

Apple	0.1	Green & Red Pepper(Dried)	5.0	Potato	0.05
Apricot	0.3	Green & Red Pepper(Fresh)	1.0	Rape(Leaves)	0.5
Beat	0.3	Jujube/Jujube(Dried)	0.5	Rape(Seeds)	0.5
Blueberry	2.0	Korean Cabbage(Dried)	10	Red Bean	0.05
Broccoli	1.0	Korean Cabbage, Head	0.7	Rice	0.1
Cabbage	0.2	Korean Cabbage,	3.5	Rubi Fructus	0.5

Chamnamul	10	Korean Melon	1.0	Sorghum	1.0
Chard	15	Leafy Vegetable	3.0	Soy Bean	0.2
Cherry	0.3	Mandarin	0.3	Strawberry	1.0
Chinese Matrimony Vine(Dried)	10	Parsley	7.0	Sweet Pepper	1.0
Chwinamul	10	Peach	1.0	Watermelon	0.2
Corn	0.05	Pear	0.5	Welsh Onion	0.5
Crown Daisy	20	Perilla Leaves	20	Welsh Onion(Dried)	2.0
Cucumber	0.5	Persimmon	1.0	Wild Grape	0.5
Ginger	0.05	Plum	0.5		

(291) Zoxamide

◎ Residue definition : Zoxamide

Chieves	3	Korean Cabbage, Head	1	Pear	0.5
Cucumber	0.5	Korean Cabbage, Head(Dried)	15	Potato	0.2
Fig	0.5	Korean Melon	0.5	Sweet Pepper	0.3
Grape	3	Melon	0.5	Tomato	2
Green & Red Pepper(Fresh)	0.3	Onion	0.2	Watermelon	0.05
Korean Cabbage	3	Other Agricultural Products	0.05		

(292) Quinclorac

◎ Residue definition : Quinclorac

Rice	0.05

(293) 4-Chlorophenoxy acetate (4-CPA)

◎ Residue definition : 4-CPA

Eggplant	0.05	Tomato	0.05		

(294) Terbuthylazine

◎ Residue definition : Terbuthylazine

Apple	0.1	Mandarin	0.1	Other Agricultural Product	0.05

(295) Thenylchlor

◎ Residue definition : Thenylchlor

Rice	0.05

(296) Tecloftalam

◎ Residue definition : Tecloftalam

Rice	0.5

(297) Tetraconazole

◎ Residue definition : Tetraconazole

Cucumber	1.0	Korean Plum	0.3	Strawberry	1.0
Egg plant	0.5	Mandarin	2.0	Sweet Pepper	1.0
Grape	2.0	Pepper Leaves	1.0	Tomato	2.0
Green & Red Pepper(Dried)	3.0	Perilla Leaves	15	Watermelon	0.2
Green & Red Pepper(Fresh)	1.0	Pome Fruits	1.0	Welsh Onion	5.0
Green Soy Bean	2.0	Soy Bean	0.2	Wild Grape	3.0
Korean Melon	1.0	Squash	0.2		

(298) Thiazopyr

◎ Residue definition : Thiazopyr

Mandarin	0.05

(299) Thifluzamide

◎ Residue definition : Thifluzamide

Garlic	0.05	Mulberry	0.05	Strawberry	0.5
Green Garlic	0.5	Onion	0.05	Watermelon	0.05
Korean Melon	0.3	Rice	0.1		

(300) Pentoxazone

◎ Residue definition : Pentoxazone

Rice	0.05

(301) Fenhexamid

◎ Residue definition : Fenhexamid

Apple	1.0	Grape	3.0	Perilla Leaves	30
Chard	15	Green & Red Pepper(Fresh)	5.0	Plum	1.0
Cherry	5.0	Mandarin	1.0	Strawberry	2.0
Cucumber	0.5	Onion	0.05	Sweet Pepper	3.0
Egg plant	2.0	Peach	1.0	Tomato	2.0
Garlic	0.1				

(302) Fosetyl-aluminium

◎ Residue definition : Fosetyl-aluminium

Apple	25.0	Green & Red Pepper(Fresh)	20.0	Onion	5.0
Cucumber	30.0	Korean Cabbage	20	Potato	20.0
Fig	1.0	Korean Cabbage, Head	7.0	Sesame Seed	2.0
Grape	25.0	Korean Melon	10.0		

(303) Forchlorfenuron

◎ Residue definition : Forchlorfenuron

Grape	0.05	Korean melon	0.05	Squash	0.05
Kiwifruit	0.05	Melon	0.05	Watermelon	0.05

(304) Probenazole

◎ Residue definition : Probenazole

Green & Red Pepper(Fresh)	0.07	Korean Cabbage, Head	0.07	Sweet Pepper	0.07
Korean Cabbage	0.07	Rice	0.1		

(305) Propaquizafop

◎ Residue definition : Propaquizafop

Garlic	0.05	Pepper leaves	0.05	Soybean	0.05
Green & Red pepper, fresh	0.05				

(306) Pretilachlor

◎ Residue definition : Pretilachlor

Rice	0.1

(307) Fthalide

◎ Residue definition : Fthalide

Pineapple	0.01	Rice	1.0

(308) Flusulfamide

◎ Residue definition : Flusulfamide

Korean Cabbage	0.05	Korean Cabbage, Head	0.05

(309) Flutolanil

◎ Residue definition : Flutolanil

Chieves	10	Onion	0.05	Soy Bean	0.2
Green & Red	1.0	Other Agricultural Products	0.05	Strawberry	5.0
Garlic(Green Garlic)	0.05	Rice	1.0	Sweet Pepper	1.0
Lettuce(Head)	0.7				

(310) Flufenacet

◎ Residue definition : Flufenacet

Potato	0.05	Soybean	0.05

(311) Pyrazosulfuron-ethyl

◎ Residue definition : Pyrazosulfuron-ethyl

Rice	0.05

(312) Pyrazoxyfen

◎ Residue definition :Pyrazoxyfen

Rice	0.05

(313) Pyroquilon

◎ Residue definition : Pyroquilon

Rice	0.1

(314) Pyriminobac-methyl

◎ Residue definition : Pyriminobac-methyl (Sum of residues of (E)-pyriminobac-methyl and (Z)-pyrimi nobac-methyl)

Rice	0.05

(315) Pyrimidifen

◎ Residue definition : Pyrimidifen

Apple	0.2	Mandarin	0.2	Pear	0.2

(316) Pyributicarb

◎ Residue definition : Pyributicarb

Rice	0.05

(317) Hymexazol

◎ Residue definition : Hymexazol

Rice	0.05	Green & red pepper,fresh	0.05	Sweet pepper	0.05

(318) Halosulfuron-methyl

◎ Residue definition : Halosulfuron-methyl

Rice	0.05

(319) Nicosulfuron

◎ Residue definition : Nicosulfuron

Corn	0.3

(320) Dazomet

◎ Residue definition : Methyl isothiocyanate resulting from the use of dazomet, expressed as dazomet

Garlic	0.1	Lettuce(Leaf)	0.1	Tomato	0.1
Ginger	0.1	Melon	0.1	Watermelon	0.1
Korean Melon	0.1				

(321) Dinotefuran

◎ Residue definition : Dinotefuran

Artemisia	0.3	Korean Melon	2.0	Pumpkin Young Leaves	5.0
Blueberry	1.0	Korean Plum	2.0	Radish(Root)	0.05
Broccoli	2.0	Mandarin	1.0	Rice	1.0
Cabbage	0.3	Melon	1.0	Rubi Fructus	2.0
Cucumber	1.0	Mulberry	1.0	Soy Bean	0.05
Eggplant	0.5	Mulberry Leaves	15	Squash	2.0
Fig	1.0	Mustard Green	2.0	Strawberry	2.0
Grape	5.0	Peach	0.5	Sweet Pepper	2.0
Green & Red Pepper(Fresh)	2.0	Perilla Leaves	30	Tomato	1.0
Kiwifruit	1.0	Pome Fruits	0.5	Watermelon	0.5
Korean Cabbage	3.0	Potato	0.1	Welsh Onion	7.0
Korean Cabbage, Head	1.0				

(322) Dimepiperate

◎ Residue definition : Dimepiperate

Rice	0.05

(323) Boscalid

◎ Residue definition : Boscalid

Chard	30	Lettuce(Leaf)	20	Rubi Fructus	5.0
Chieves	20	Mandarin	0.5	Sedum	30
Crown Daisy	20	Melon	0.7	Squash	2.0
Cucumber	0.3	Onion	0.05	Stone Fruits	1.0
Garlic	0.3	Perilla Leaves	30	Strawberry	5.0
Grape	5.0	Pome Fruits	1.0	Sweet Pepper	3.0
Green & Red Pepper(Fresh)	3.0	Pumpkin Young Leaves	30	Tomato	2.0
Korean Melon	5.0	Rape(Leaves)	0.3	Watermelon	0.3
Lettuce(Head)	20	Rape(Seeds)	2.0	Welsh Onion	7.0

(324) Bifenazate

◎ Residue definition : Bifenazate

Apple	1.0	Korean Melon	0.7	Strawberry	1.0
Cucumber	0.5	Mandarin	1.0	Sweet Pepper	2.0
Eggplant	0.5	Peach	0.3	Tea	3.0
Grape	1.0	Pear	0.2	Watermelon	0.1
Green & Red Pepper(Fresh)	3.0				

(325) Cyazofamid

◎ Residue definition : Cyazofamid

Chard	10	Korean Cabbage, Head	0.7	Potato	0.1
Crown Daisy	15	Korean Melon	0.5	Sesame Seed	0.1
Cucumber	0.5	Mandarin	0.5	Spinach	3.0
Ginger	0.5	Melon	0.5	Sweet Pepper	2.0
Grape(Wild Grapes)	2.0	Onion	1.0	Tomato	0.5
Green & Red Pepper(Fresh)	2.0	Other Agricultural Products	0.05	Watermelon	1.0
Jujube/Jujube(Dried)	3.0	Peach	1.0	Welsh Onion	1.0
Korean Cabbage	2.0	Pear	0.2		

(326) Acequinocyl

◎ Residue definition : Acequinocyl

Apple	0.5	Grape	0.2	Pear	0.3

Apricot	2.0	Green & Red Pepper(Fresh)	1.0	Strawberry	1.0
Bonnet Bellflower	0.1	Mandarin	1.0	Tea	3.0
Cherry	0.5	Melon	0.5	Watermelon	0.2
Eggplant	1.0	Peach	2.0	Yuja, *Citrus junos*	1.0
Fig	2.0				

(327) Orysastrobin

◎ Residue definition : Orysastrobin

Other Agricultural Products	0.07	Rice	0.3

(328) Ethoxysulfuron

◎ Residue definition : Ethoxysulfuron

Rice	0.1

(329) Oxaziclomefone

◎ Residue definition : Oxaziclomefone

Rice	0.1

(330) Indanofan

◎ Residue definition : Indanofan

Rice	0.1

(331) Carfentrazone-ethyl

◎ Residue definition : Carfentrazone-ethyl

Apple	0.1	Rice	0.1

(332) Clothianidin

◎ Residue definition : Clothianidin

Blueberry	0.05	Korean Cabbage, Head	0.2	Pumpkin Young Leaves	1.0
Cherry	0.5	Korean Melon	1.0	Rice	0.1
Chestnut	0.05	Korean Plum	0.5	Rubi Fructus	1.0
Chieves	2.0	Leafy Vegetable	3.0	Sedum	5.0
Chinese Matrimony	1.0	Mandarin	1.0	Soy Bean	0.1
Cucumber	0.5	Maximowiczia Chinensis	3.0	Soy Bean(Fresh)	1.0
Eggplant	0.3	Melon	0.05	Squash	0.5
Fig	0.5	Millet	0.3	Strawberry	0.5
Garlic	0.05	Onion	0.05	Sweet Pepper	2.0

Grape	2.0	Peach	0.5	Tomato	1.0
Green & Red Pepper(Dried)	10.0	Perilla Leaves	7.0	Water Dropwort	3.0
Green & Red Pepper(Fresh)	2.0	Plum	0.5	Watermelon	0.5
Green Garlic	0.3	Pome Fruits	1.0	Welsh Onion	0.3
Green Soy Bean	0.05	Potato	0.1	Yam	0.05
Kiwifruit	1.0				

(333) Tebupirimfos

◎ Residue definition : Tebupirimfos

Garlic	0.01	Korean Cabbage, Head	0.01	Radish(Root)	0.05
Green & Red Pepper(Fresh)	0.01	Potato	0.01	Spinach	0.01
Korean Cabbage	0.01	Radish(Leaves)	0.1		

(334) Trinexapac-ethyl

◎ Residue definition : Trinexapac-ethyl

Rice	0.5

(335) Trifloxystrobin

◎ Residue definition : Trifloxystrobin

Barley	1.0	Korean Cabbage	0.5	Strawberry	0.7
Blueberry	10	Korean Cabbage, Head	0.2	Sweet Pepper	2.0
Bonnet Bellflower	0.2	Korean Melon	1.0	Tomato	2.0
Cucumber	0.5	Mandarin	0.5	Watermelon	0.5
Garlic	0.5	Pome Fruits	0.7	Welsh Onion	2.0
Grape	1.0	Rubi Fructus	1.0	Wild Grape	3.0
Green & Red Pepper(Dried)	12	Squash	0.2	Yam*	0.2
Green & Red Pepper(Fresh)	2.0	Stone Fruits	2.0	Yuja, *Citrus Junos*	0.5
Green Garlic	1.0				

(336) Thidiazuron

◎ Residue definition : Thidiazuron

Grape	0.2	Korean melon	0.1	Watermelon	0.1
Kiwifruit	0.1				

(337) Thiamethoxam

◎ Residue definition : Thiamethoxam

Barley	0.4	Kiwifruit	0.5	Rice	0.1
Blueberry	1.0	Korean Cabbage	1.0	Rubi Fructus	1.0
Broccoli	1.0	Korean Cabbage, Head	0.5	Sedum	5.0
Chard	10	Korean Melon	0.5	Soy Bean	1.0
Chieves	0.1	Lettuce(Leaf)	15	Squash	0.3
Chwinamul	10	Mandarin	1.0	Stone Fruits	1.0
Corn	0.05	Melon	0.3	Strawberry	1.0
Crown Daisy	1.0	Mustard Green	5.0	Sweet Pepper	1.0
Cucumber	0.5	Perilla Leaves	10	Tea	2.0
Eggplant	0.2	Pome Fruits	0.5	Tomato	0.2
Fig	2.0	Potato	0.1	Water Dropwort	2.0
Grape	1.0	Pumpkin Young Leaves	3.0	Watermelon	0.1
Green & Red Pepper(Fresh)	1.0	Radish(Leaves)	2.0	Welsh Onion	2.0
Green Tea Extract	10.0	Radish(Root)	0.5		

(338) Thiacloprid

◎ Residue definition : Thiacloprid

Chestnut	0.05	Korean Cabbage, Head	0.2	Sedum	7.0
Cucumber	0.3	Korean Melon	0.5	Soy Bean	0.05
Eggplant	0.1	Mandarin	0.3	Stone Fruits	1.0
Grape	1.0	Perilla Leaves	20	Strawberry	2.0
Green & Red Pepper(Fresh)	1.0	Pome Fruits	0.7	Sweet Pepper	1.0
Green Soy Bean	1.0	Potato	0.1	Tomato	1.0
Jujube(Dried)	1.5	Rice	0.1	Watermelon	0.2
Korean Cabbage	0.5	Rubi Fructus	0.7	Welsh Onion	1.0

(339) Thiocyclam

◎ Residue definition : Nereistoxin

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (116) Cartap.

(340) Fenoxanil

◎ Residue definition : Fenoxanil

Rice	0.5

(341) Fentrazamide

◎ Residue definition : Fentrazamide

Rice	0.1

(342) Flumioxazine

◎ Residue definition : Flumioxazine

Apple	0.1	Mandarin	0.1

(343) Fluroxypyr

◎ Residue definition : Fluroxypyr

Apple	0.1

(344) Pyrazolate

◎ Residue definition : Pyrazolate

Rice	0.1

(345) Pyraclostrobin

◎ Residue definition : Pyraclostrobin

Apple	0.2	Korean Cabbage, Head	0.2	Plum	1.0
Cherry	2.0†	Korean Melon	0.5	Potato	0.5
Chieves	10	Korean Plum	3.0	Rubi Fructus	1.0
Chinese Matrimony Vine (Dried)	5.0	Mandarin	1.0	Sesame Seed	0.05
Cucumber	0.5	Maximowiczia Chinensis (Dried)	5.0	Soybean	0.05
Garlic	0.05	Melon	0.3	Strawberry	1.0
Green & Red Pepper(Dried)	3.0	Onion	0.05	Sweet Pepper	0.5
Green & Red Pepper(Fresh)	0.5	Parsley	7.0	Tomato	1.0
Green Garlic	0.5	Peach	1.0	Watermelon	0.1
Green Soy Bean	1.0	Pear	1.0	Welsh Onion	1.0
Jujube	2.0	Perilla Leaves	10	Grape(Wild Grapes)	3.0
Korean Cabbage	0.5	Persimmon	0.1		

(346) Pyraflufen-ethyl

◎ Residue definition : Pyraflufen-ethyl

Apple	0.1	Green & Red Pepper(Fresh)	0.05

(347) Pyriftalid

◎ Residue definition : Pyriftalid

Rice	0.1

(348) Nabam

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357) Dithiocarba

(349) Novaluron

◎ Residue definition : Novaluron

Apple	1.0	Korean Cabbage	0.1	Rape(Seeds)	2.0
Chamnamul	10	Korean Cabbage, Head	0.05	Rubi Fructus	2.0
Chieves	10	Korean Melon	0.5	Spinach	5.0
Chinese Matrimony	5.0	Mandarin	0.5	Strawberry	1.0
Chwinamul	5.0	Melon	1.0	Sweet Pepper	0.7
Crown Daisy	20	Mustard Leaf	2.0	Tea	5.0
Cucumber	0.5	Peach	1.0	Tomato	0.5
Green & Red Pepper(Fresh)	0.7	Pear	1.0	Watermelon	0.5
Jujube	0.7	Rape(Leaves)	0.05	Welsh Onion	0.3
Jujube(Dried)	1.0				

(350) Maneb

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357)

(351) Mancozeb

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357)

(352) Methoxyfenozide

◎ Residue definition : Methoxyfenozide

Blueberry	3.0†	Korean Cabbage,	8.0	Rubi Fructus	1.0
Chestnut	0.1	Korean Melon	0.3	Rubi Fructus(Dried)	6.0
Corn	0.03†	Leafy Vegetable	20	Soy Bean	0.05
Cranberry	0.5†	Lemon	1.5†	Squash	0.3
Crown Daisy	10	Mandarin	1.0	Stone Fruits(Jujube(Dried)	2.0
Cucumber	0.3	Maximowiczia	1.0	Strawberry	0.7
Grape	2.0	Orange	3.0†	Sweet Pepper	1.0

Grapefruits	0.7†	Parsley	5.0	Sweet Potato	0.2
Green & Red Pepper(Dried)	5.0	Perilla Leaves	30	Tomato	2.0
Green & Red Pepper(Fresh)	1.0	Pome Fruits	2.0	Watermelon	0.5
Green Soy Bean	0.5	Rape(Leaves)	0.05	Welsh Onion	2.0
Kidney Bean	0.2†	Rape(Seeds)	1.0	Welsh Onion(Dried)	10.0
Korean Cabbage(Dried)	20	Red Bean	0.05	Wild Grape	1.0
Korean Cabbage, Head	2.0	Rice	1.0		

(353) Metconazole

◎ Residue definition : Metconazole

Apple	1.0	Korean Plum	0.5	Rice	0.05
Carrot	0.05	Mandarin	1.0	Strawberry	1.0
Garlic	0.1	Onion	0.05	Sweet Pepper	0.5
Grape	2.0	Peach	0.3	Tomato	0.5
Green & Red Pepper(Fresh)	0.5	Pear	0.5	Welsh Onion	1.0
Green Garlic	0.05	Persimmon	0.5	Wild Garlic	0.1

(354) Metiram

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357) Dithiocarbamates.

(355) Spirodiclofen

◎ Residue definition : Spirodiclofen

Apricot	5.0	Cherry	2.0	Rubi Fructus	1.0
Eggplant	2.0	Mandarin	2.0	Strawberry	2.0
Grape	1.0	Melon	2.0	Sweet Pepper	5.0
Green & Red Pepper(Fresh)	5.0	Peach	0.5	Tea	5.0
Jujube*	5.0	Plum	2.0	Watermelon	0.5
Korean Melon	0.5	Pome Fruits	1.0	Yuja, *Citrus junos*	2.0

(356) Ethaboxam

◎ Residue definition : Ethaboxam

Chard	20	Korean Cabbage	2.0	Potato	0.5
Cucumber	2.0	Korean Cabbage, Head	0.7	Sesame Seed	0.1
Ginger	1.0	Korean Melon	0.5	Sweet Pepper	1.0
Ginger(Dried)	5.0	Lettuce(Leaf)	1.0	Tomato	1.0
Grape(Wild Grapes)	3.0	Melon	0.5	Watermelon	0.5

Green & Red Pepper(Fresh)	1.0	Onion	0.1		

(357) Dithiocarbamates

◎ Residue definition : Total dithiocarbamates

Apple	2.0	Korean Cabbage	5.0	Pear	0.5
Carrot	0.2	Korean Cabbage, Head	2.0	Persimmon	0.5
Chinese Matrimony Vine*	5.0	Korean Melon	2.0	Potato	0.3
Corn	0.05	Mandarin	5.0	Sesame seed	2.0
Cucumber	1.0	Maximowiczia	10	Sweet Pepper	7.0
Garlic	0.3	Melon	1.0	Tomato	3.0
Ginseng(Fresh)	0.3	Onion	0.5	Watermelon	0.5
Grape	5.0	Peach	3.0	Welsh Onion	0.3
Green & Red Pepper(Fresh)	7.0	Peanut	0.1		

(358) Iprovalicarb

◎ Residue definition : Iprovalicarb

Chieves	0.3	Green & Red Pepper(Fresh)	1.0	Potato	0.5
Cucumber	1.0	Korean Cabbage	2.0	Sesame Seed	0.1
Fig	1.0	Korean Cabbage, Head	0.7	Tomato	2.0
Garlic	0.1	Korean Melon	0.3	Watermelon	0.5
Grape	2.0	Onion	0.5	Wild Grape	5.0

(359) Zineb

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357)

(360) Ziram

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357)

(361) Tefluthrin

◎ Residue definition : Tefluthrin

Chieves	2.0	Mustard Leaf	0.05	Radish(Root)	0.05
Chwinamul	0.05	Onion	0.1	Strawberry	0.05
Garlic	0.1	Peanut	0.05	Sweet Pepper	0.05
Green & Red Pepper(Fresh)	0.05	Perilla Leaves	0.2	Sweet Potato	0.05

Korean Cabbage	0.1	Potato	0.05	Watermelon	0.05
Korean Cabbage, Head	0.1	Radish(Leaves)	0.05	Welsh Onion	0.05

(362) Triazmate

◎ Residue definition : Triazamate

Apple	0.1	Green & Red pepper, fresh	0.05	Other Agricultural Product	0.05

(363) Thiram

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357)

(364) Tiadinil

◎ Residue definition : Tiadinil

Rice	1.0

(365) Fenamidone

◎ Residue definition : Fenamidone

Cucumber	0.1	Onion	0.1	Sweet Pepper	1.0
Grape	0.7	Pepper Leaves	5.0	Tomato	1.0
Green & Red Pepper(Fresh)	1.0	Potato	0.1	Watermelon	0.2
Korean Melon	0.3	Sesame Seed	0.2		

(366) Ferbam

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357)

(367) Furathiocarb

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (114)

(368) Propineb

◎ Residue definition : Total dithiocarbamates

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (357)

(369) Propisochlor

◎ Residue definition : Propisochlor

Corn	0.05	Galic	0.1		

(370) Benthiavalicarb-isopropyl

◎ Residue definition : Benthiavalicarb-isopropyl

Cucumber	0.07	Korean Cabbage, Head	0.3	Potato	0.05
Grape	0.5	Korean Melon	0.5	Sesame Seed	0.2
Green & Red Pepper(Fresh)	2.0	Onion	0.5	Sweet Pepper	2.0
Korean Cabbage	1.0	Other Agricultural Products	0.07	Tomato	1.0

(371) Diniconazole

◎ Residue definition : Diniconazole

Apple	1.0	Korean Cabbage	0.3	Other Agricultural Product	0.05
Garlic	0.05	Korean Cabbage, Head	0.1	Pear	1.0

(372) Mecoprop-P

◎ Residue definition : Mecoprop-P

Apple	0.05	Pear	0.05	Rice	0.01
Mandarin	0.05				

(373) Spiromesifen

◎ Residue definition : Spiromesifen

Apple	0.5	Korean Melon	0.5	Rubi Fructus	2.0
Apricot	1.0	Mandarin	0.5	Strawberry	1.0
Cherry	1.0	Melon	0.3	Sweet Pepper	3.0
Cucumber	0.5	Other Agricultural Products	0.05	Tomato	1.0
Grape	1.0	Peach	0.2	Watermelon	0.2
Green & Red Pepper(Fresh)	3.0	Pear	0.5	Yuja, *Citrus junos*	0.7

(374) Alanycarb

◎ Residue definition : Alanycarb

Apple	0.5	Cucumber	0.1	Other agricultural products	0.05

(375) Ofurace

◎ Residue definition : Ofurace

Grape	0.3	Other agricultural products	0.02	Tomato	2.0

(376) Triflumuron

◎ Residue definition : Triflumuron

Apple	0.5	Other agricultural products	0.05

(377) Thifensulfuron-methyl

◎ Residue definition : Thifensulfuron-methyl

Barley	0.1	Other agricultural products	0.05

(378) Ferimzone

◎ Residue definition : Ferimzone (Sum of residues of (E)-ferimzone and (Z)-ferimzone)

Other agricultural products	0.05	Rice	0.7

(379) Fluacrypyrim

◎ Residue definition : Fluacrypyrim

Apple	1.0	Mandarin	0.7	Sweet Pepper	3.0
Fig	0.5	Other Agricultural Products	0.1	Watermelon	0.5
Green & Red Pepper(Fresh)	3.0	Pear	0.5		

(380) Pyridalyl

◎ Residue definition : Pyridalyl

Apple	1.0	Green & Red Pepper(Fresh)	2.0	Radish(Leaves)	10
Asparagus	2.0	Korean Cabbage	2.0	Radish(Root)	0.3
Broccoli	3.0	Korean Cabbage, Head	0.7	Rape(Leaves)	0.05
Cabbage	0.5	Korean Melon	0.5	Rape(Seeds)	0.05
Chamnamul	20	Mandarin	2.0	Rubi Fructus	1.0
Chieves	10	Mustard Leaf	5.0	Spinach	5.0
Chinese Matrimony	20	Other Agricultural Products	0.05	Strawberry	2.0
Chwinamul	5.0	Peach	3.0	Sweet Pepper	2.0
Crown Daisy	20	Plum	2.0	Watermelon	0.2
Cucumber	0.5	Pomegranate	1.0	Welsh Onion	0.5

(381) 6-Benzyl aminopurine

◎ Residue definition : Benzyladenine

Apple	0.1	Mandarin	0.2	Pear	0.2

(382) Benzobicyclon

◎ Residue definition : Benzobicyclon

Rice	0.1

(383) Cafenstrole

◎ Residue definition : Cafenstrole

Rice	0.05

(384) Cyflufenamid

◎ Residue definition : Cyflufenamid

Eggplant	0.3	Green & Red Pepper(Fresh)	0.3	Peach	0.2
Fruiting Vegetable,	0.5	Korean Plum	0.1	Pome Fruits	0.2
Grape	0.5	Other Agricultural Products	0.1	Strawberry	0.5

(385) Fenclorim

◎ Residue definition : Fenclorim

Rice	0.1

(386) Flonicamid

◎ Residue definition : Flonicamid

Apple	0.7	Lettuce(Leaf)	2.0	Rice	0.1
Chinese Matrimony Vine	5.0	Mandarin	1.0	Soy Bean	0.05
Cucumber	2.0	Melon	1.0	Squash	3.0
Fig	0.5	Other Agricultural Products	0.1	Strawberry	1.0
Green & Red Pepper(Fresh)	2.0	Peach	1.0	Sweet Pepper	2.0
Green Soy Bean	0.5	Pear	0.3	Tea	10
Korean Cabbage	2.0	Pomegranate	0.05	Tomato	1.0
Korean Cabbage, Head	0.7	Potato	0.3	Watermelon	0.5
Korean Plum	2.0	Pumpkin Young Leaves	10		

(387) Flucetosulfuron

◎ Residue definition : Flucetosulfuron

Rice	0.1

(388) Hydrogen cyanide

◎ Residue definition : Hydrogen cyanide

Banana	5.0	Korean Cabbage, Head	5.0	Pineapple	5.0
Cabbage	5.0	Lettuce(Leaf)	5.0	Squash	5.0
Cucumber	5.0	Orange	5.0	Sweet Pepper	5.0
Eggplant	5.0	Perilla Leaves	5.0	Tomato	5.0
Korean Cabbage	5.0				

(389) Penoxsulam

◎ Residue definition : Penoxsulam

Rice	0.1

(390) Simeconazole

◎ Residue definition : Simeconazole

Bonnet Bellflower	0.05	Mandarin	0.5	Rubi Fructus	0.3
Cucumber	0.5	Other Agricultural Products	0.05	Strawberry	0.3
Garlic(Green Garlic)	0.05	Peach	0.5	Sweet Pepper	2.0
Grape	1.0	Plum	0.2	Watermelon	0.1
Green & Red Pepper(Fresh)	2.0	Pome Fruits	0.5	Wild Grape	3.0
Jujube*	2.0	Rice	0.05	Yuja, *Citrus junos*	0.2
Korean Melon	0.3				

(391) Mandipropamid

◎ Residue definition : Mandipropamid

Cucumber	0.5	Melon	0.5	Spinach	25
Grape	5.0	Onion	0.05	Sweet Pepper	5.0
Green & Red Pepper(Fresh)	5.0	Other Agricultural Products	0.05	Tomato	0.3
Korean Cabbage	3.0	Perilla Leaves	25	Watermelon	1.0
Korean Cabbage, Head	1.0	Potato	0.1	Welsh Onion	0.7
Korean Melon	0.3	Sesame Seed	1.0		

(392) Mesotrione

◎ Residue definition : Mesotrione

Corn	0.2	Rice	0.2

(393) Metaldehyde

◎ Residue definition : Metaldehyde

Korean Cabbage	1.0	Korean Cabbage, Head	1.0	Other Agricultural Product	0.05

(394) Bistrifluron

◎ Residue definition : Bistrifluron

Apple	1.0	Korean Cabbage, Head	0.3	Pumpkin Young Leaves	15
Asparagus	1.0	Korean Melon	0.5	Spinach	5.0
Chard	10	Melon	1.0	Squash	0.1
Cucumber	0.5	Other Agricultural Products	0.2	Strawberry	0.5
Grape	0.5	Peach	1.0	Sweet Pepper	2.0
Green & Red Pepper(Fresh)	2.0	Pear	1.0	Watermelon	0.2
Korean Cabbage	1.0	Plum	0.7	Welsh Onion	2.0

(395) Fluopicolide

◎ Residue definition : Fluopicolide

Cucumber	0.5	Korean Cabbage, Head	0.3	Potato	0.1
Grape	0.7	Korean Melon	0.5	Sweet Pepper	1.0
Green & Red Pepper(Fresh)	1.0	Onion	0.5	Tomato	0.2
Korean Cabbage	1.0	Other Agricultural Products	0.1	Watermelon	1.0

(396) Ethychlozate

◎ Residue definition : Ethychlozate

Mandarin	1.0	Other agricultural products	0.05

(397) Qxadiargyl

◎ Residue definition : Oxadiargyl

Rice	0.05

(398) Quinalphos

◎ Residue definition : Quinalphos

Rice	0.01

(399) Cyflumetofen

◎ Residue definition : Cyflumetofen

Apple	0.3	Mandarin	0.5	Strawberry	1.0
Apricot	1.0	Other Agricultural Products	0.07	Tea	2.0
Cherry	0.7	Peach	0.5	Watermelon	1.0
Eggplant	1.0	Pear	1.0	Yuja, *Citrus junos*	1.0
Korean Melon	1.0	Rubi Fructus	1.0		

(400) Pyribenzoxim

◎ Residue definition : Pyribenzoxim

Rice	0.05

(401) DBEDC

◎ Residue definition : DBEDC

Cucumber	3.0	Other Agricultural Products	0.05	Watermelon	0.2
Korean Melon	2.0	Squash	3.0		

(402) Metamifop

◎ Residue definition : Metamifop

Rice	0.05

(403) Metaflumizone

◎ Residue definition : Metaflumizone (Sum of isomers)

Apple	1.0	Korean Cabbage, Head	0.7	Perilla Leaves	5.0
Broccoli	0.3	Korean Melon	0.3	Persimmon	0.7
Corn	0.05	Korean Plum	1.0	Rice	0.1
Cucumber	0.5	Mandarins	1.0	Strawberry	2.0
Green & Red Pepper(Fresh)	1.0	Other Agricultural Products	0.05	Sweet Pepper	1.0
Jujube	2.0	Peach	0.5	Watermelon	0.5
Jujube(Dried)	5.0	Pear	0.5	Welsh Onion	3.0
Korean Cabbage	2.0				

(404) Metrafenone

◎ Residue definition : Metrafenone

Cucumber	0.7	Other Agricultural Products	0.05	Sweet Pepper	2.0
Green & Red Pepper(Fresh)	2.0	Squash	1.0	Tomato	2.0
Korean Melon	2.0	Strawberry	5.0	Watermelon	0.5
Melon	2.0				

(405) Cyenopyrafen

◎ Residue definition : Cyenopyrafen

Apple	1.0	Jujube(Dried)	1.0	Pear	1.0
Eggplant	2.0	Korean Melon	0.5	Strawberry	1.0
Grape	3.0	Mandarins	0.5	Sweet Pepper	1.0
Green & Red pepper(Fresh)	3.0	Other Agricultural Products	0.05	Tea	0.5
Jujube	0.5	Peach	0.5	Watermelon	0.05

(406) Bromobutide

◎ Residue definition : Bromobutide

Rice	0.05

(407) Isotianil

◎ Residue definition : Isotianil

Rice	0.1

(408) Spinetoram

◎ Residue definition : Spinetoram

Artemisia	0.05	Korean Melon	0.05	Radish	0.05
Blueberry	0.2†	Korean Wasabi Leaves	1.0	Radish(Leaves)	0.5
Celery	6.0†	Lettuce(Head)	1.5	Rasberry	0.7†
Chard	1.0	Lettuce(Leaf)	7.0	Rubi Fructus	0.05
Chieves	0.5	Mandarins	0.5	Spinach	0.5
Chwinamul	3.0	Melon	0.2	Squash	0.05
Crown Daisy	2.0	Mustard Leaf	0.3	Strawberry	0.1
Cucumber	0.05	Orange	0.05†	Sweet Pepper	0.5
Grape	1.0	Other Agricultural Products	0.05	Tea	0.05
Green & Red Pepper(Fresh)	0.5	Perilla Leaves	2.0	Tomato	0.5
Kiwifruit	0.1	Potato	0.05	Watermelon	0.05
Korean Cabbage	1.0	Pumpkin Young Leaves	3.0	Welsh Onion	0.5
Korean Cabbage, Head	0.3				

(409) Amisulbrom

◎ Residue definition : Amisulbrom

Broccoli	2.0	Korean Melon	0.5	Spinach	3.0
Chieves	3.0	Lettuce(Leaf)	10	Strawberry	2.0
Cucumber	0.7	Melon	1.0	Sweet Pepper	1.0
Ginger	2.0	Onion	0.2	Tomato	1.0
Grape	3.0	Other Agricultural Products	0.05	Watermelon	0.2
Green & Red Pepper(Fresh)	1.0	Perilla Leaves	10	Welsh Onion	3.0
Korean Cabbage	2.0	Potato	0.05		
Korean Cabbage, Head	0.7	Sesame Seed	0.05		

(410) Oxolinic acid

◎ Residue definition : Oxolinic acid

Bi-reum	20	Korean Cabbage	3.0	Plum	0.1
Chieves	10	Korean Cabbage, Head	1.0	Radish(Leaves)	15
Garlic	0.05	Mandarins	0.5	Radish(Root)	0.3
Green & Red Pepper(Fresh)	3.0	Other Agricultural Products	0.05	Rice	0.05
Green Garlic	2.0	Peach	2.0	Sweet Pepper	3.0

(411) Orthosulfamuron

◎ Residue definition : Orthosulfamuron

Rice	0.05

(412) MCPA

◎ Residue definition : MCPA

Rice	0.05	Apple	0.05	Pear	0.05

(413) Quinoclamine

◎ Residue definition : Quinoclamine

Rice	0.05

(414) Quinmerac

◎ Residue definition : Quinmerac

Peach	0.05

(415) Chromafenozide

◎ Residue definition : Chromafenozide

Green & Red Pepper(Fresh)	2.0	Korean Cabbage	5.0	Welsh Onion	0.3
Other Agricultural Products	0.05	Apple	1.0	Beat	0.2
Mandarin	2.0	Rice	0.5	Beat Leaves	2.0
Peach	0.5	Tea	3.0	Korean Cabbage, Head	1.0

(416) Chlorantraniliprole

◎ Residue definition : Chlorantraniliprole

Asparagus	0.3	Korean Melon	1.0	Soy Bean	0.05
Blueberry	1.0	Lettuce(Leaf)	7.0	Soy Bean(Fresh)	1.0
Chard	5.0	Mandarins	1.0	Spinach	5.0
Chwinamul	7.0	Melon	0.2	Squash	0.7
Corn	0.05	Other Agricultural Products	0.05	Stone Fruits(Jujube(Dried)	1.0
Cucumber	0.5	Perilla Leaves	10	Strawberry	1.0
Garlic	0.05	Pome Fruits	1.0	Sweet Pepper	1.0
Grape	2.0	Potato	0.05	Tomato	1.0
Green & Red Pepper(Fresh)	1.0	Pumpkin Young Leaves	7.0	Watermelon	0.05
Green Garlic	0.05	Red Bean	0.05	Welsh Onion	2.0
Korean Cabbage	3.0	Rice	0.5		
Korean Cabbage, Head	1.0	Rubi Fructus	1.0		

(417) Flubendiamide

◎ Residue definition : Flubendiamide

Apple	1.0	Kale	0.7	Pear	1.0
Broccoli	3.0	Korean Cabbage	3.0	Perilla Leaves	15
Cabbage	0.3	Korean Cabbage, Head	1.0	Persimmon	0.5
Chieves	3.0	Korean Melon	1.0	Rice	0.5
Chwinamul	20	Korean Wasabi Leaves	20	Spinach	10
Corn	0.05	Lettuce(Leaf)	10	Strawberry	1.0
Cucumber	1.0	Mandarins	1.0	Sweet Pepper	1.0
Grape	1.0	Melon	1.0	Tomato	0.7
Green & Red Pepper(Fresh)	1.0	Other Agricultural Products	0.05	Watermelon	1.0
Jujube/Jujube(Dried)	1.0	Peach	0.7	Welsh Onion	3.0

(418) Piperophos

◎ Residue definition : Piperophos

Rice	0.05

(419) Prohexadione-Calcium

◎ Residue definition : Sum of the Prohexadione and prohexazione-calcium, expressed as Prohexadione-Calcium

Korean Cabbage	5.0	Other Agricultural Products	0.05	Radish(Root)	0.05
Korean Cabbage, Head	2.0	Radish(Leaves)	0.05	Rice	0.05

(420) Lindane, γ-BHC

◎ Residue definition : Lindane

Barley	0.01	Other Agricultural Products	0.01	Wheat	0.01
Corn	0.01				

(421) Lepimectin

◎ Residue definition : Sum of $L.A_3$ and $L.A_4$

Cucumber	0.2	Melon	0.05	Strawberry	0.3
Green & Red Pepper(Fresh)	0.5	Perilla Leaves	0.7	Tomato	0.2
Korean Cabbage	0.05	PumpKin Young Leaves	2.0	Watermelon	0.05
Korean Melon	0.1	Spinach	0.05	Welsh Onion	0.05
Lettuce(Leaf)	1.0	Squash	0.05		

(422) Penthiopyrad

◎ Residue definition : Penthiopyrad

Cucumber	0.5	Korean Melon	0.5	Tomato	2.0
Eggplant	2.0	Perilla Leaves	15	Watermelon	0.1
Grape	2.0	Strawberry	1.0		

(423) Picoxystrobin

◎ Residue definition : Picoxystrobin

Apple	0.3	Korean Melon	2.0	Persimmon	1.0
Cucumber	1.0	Mandarin	0.5	Watermelon	0.3
Grape	5.0	Onion	0.05		
Green & Red Pepper(Fresh)	0.5	Peach	2.0		

(424) Pyrifluquinazon

◎ Residue definition : Pyrifluquinazon

Apple	0.05	Peach	0.05	Sweet Pepper	0.5
Cucumber	0.05	Pear	0.05	Tomato	0.5
Korean Melon	0.2				

(425) Pyrimisulfan

◎ Residue definition : Ametoctradin

Rice	0.05

(426) Ametoctradin

◎ Residue definition : Ametoctradin

Cucumber	0.5	Korean Cabbage	5.0	Potato	0.05
Ginger	0.05	Korean Cabbage, Head	2.0	Tomato	2.0
Grape	5.0	Korean Melon	1.0	Watermelon	0.2
Green & Red Pepper(Fresh)	2.0	Melon	3.0	Welsh Onion	3.0
Hop	8.0†	Onion	1.5		

(427) Imicyafos

◎ Residue definition : Imicyafos

Cucumber	0.05	Strawberry	0.05	Watermelon	0.05
Korean Melon	0.05	Tomato	0.05	Yam/Yam(Dried)	0.05
Melon	0.05				

(428) Fluopyram

◎ Residue definition : Fluopyram

Cucumber	1.0	Korean Melon	2.0	Sweet Pepper	3.0
Grape	5.0	Squash	0.3	Tomato	2.0
Green & Red Pepper(Fresh)	3.0	Strawberry	3.0	Watermelon	0.5

(429) Metazosulfuron

◎ Residue definition : Metazosulfuron

Rice	0.05

(430) Sulfoxaflor

◎ Residue definition : Sulfoxaflor

Apple	0.4	Lettuce(Leaf)	5.0	Rice	0.2
Cucumber	0.5	Mandarins	1.0	Soy Bean	0.05
Grape	1.0	Peach	0.3	Spinach	3.0
Green & Red pepper(Fresh)	0.5	Pear	0.4	Squash	0.2
Green Soy Bean	2.0	Persimmon	0.3	Strawberry	0.5
Korean Cabbage	0.3	Plum	0.2	Tomato	0.5
Korean Cabbage, Head	0.1	Potato	0.05	Watermelon	0.3
Korean Melon	0.5				

(431) Isopyrazam

◎ Residue definition : Isopyrazam

Cucumber	2.0	Korean Melon	0.5	Watermelon	0.1
Strawberry	0.5				

(432) Saflufenacil

◎ Residue definition : Saflufenacil

Almond	0.03†	Grapefruit	0.03†	Pecan	0.03†
Apple	0.03†	Green & Red Pepper(Fresh)	0.02	Persimmon	0.02
Banana	0.03†	Kidney Bean	0.3†	Plum	0.03†
Barley	0.03†	Lemon	0.03†	Rape(Seeds)	0.5†
Cherry	0.03†	Mandarin	0.02	Rice	0.03†
Chestnut	0.02	Mango	0.03†	Sorghum	0.03†
Cicer arietinum	0.01†	Orange	0.03†	Sugar Cane	0.03†
Coffee Bean	0.03†	Pea	0.05†	Soybean	0.05†
Corn	0.03†	Peach	0.03†	Sunflower Seed	0.7†
Cotton Seed	0.2†	Pear	0.03†	Wheat	0.03†
Grape	0.03†				

(433) Cyantraniliprole

◎ Residue definition : Cyantraniliprole

Apple	0.1	Korean Melon	0.5	Strawberry	0.7
Cucumber	0.5	Mandarin	0.7	Sweet Pepper	1.0
Green & Red Pepper(Fresh)	1.0	Peach	0.3	Tomato	0.5
Korean Cabbage	2.0	Pear	0.2	Watermelon	0.3
Korean Cabbage, Head	0.7	Rice	0.05	Welsh Onion	2.0

(434) Epoxiconazole

◎ Residue definition : Epoxiconazole

Rice	0.3

(435) Fenpyrazamine

◎ Residue definition : Fenpyrazamine

Cucumber	0.5	Onion	0.05	Strawberry	2.0
Grape	5.0	Peach	2.0	Tomato	3.0
Mandarin	2.0				

(436) Flutianil

◎ Residue definition : Flutianil

Green & Red Pepper(Fresh)	0.5	Melon	0.05	Sweet Pepper	0.5
Cucumber	0.05	Strawberry	0.3	Watermelon	0.05
Korean Melon	0.05				

(437) Fluxapyroxad

◎ Residue definition : Fluxapyroxad

Apple	0.5	Mandarin	1.0	Rape(Seeds)	0.4†
Barley	2.0†	Melon	0.5	Sorghum	0.8†
Cherry	2.0†	Pea	0.4†	Soybean	0.15†
Corn	0.15†	Peach	0.3	Sugar Beet	0.1†
Cucumber	0.2	Peanut	0.01†	Sunflower Seed	0.2†
Grape	2.0	Pear	0.8	Sweet Pepper	0.3
Green & Red Pepper(Fresh)	0.3	Persimmon	0.3	Watermelon	0.1
Korean Melon	0.3	Potato	0.02†	Wheat	0.3†

(438) Pyriofenone

◎ Residue definition : Pyriofenone

Cucumber	0.7	Melon	0.5	Strawberry	2.0
Green & Red Pepper(Fresh)	2.0	Pumpkin Young Leaves	10	Watermelon	0.1
Korean Melon	2.0	Squash	0.5		

(439) Spirotetramat

◎ Residue definition : Sum of spirotetramat and spirotetramat-enol, expressed as spirotetramat

Apple	0.7	Korean Cabbage	5.0	Peach	1.0
Cucumber	0.3	Korean Cabbage, Head	2.0	Pear	0.5
Green & Red Pepper(Fresh)	2.0	Korean Melon	1.0	Persimmon	0.5
Kiwifruit	5.0	Mandarin	0.5	Watermelon	0.3

(440) Sulfuryl fluoride

◎ Residue definition : Sulfuryl fluoride expressed as Pyribencarb

Almond	0.08†	Pistachio	0.8†	Walnut	3.0†
Pecan	3.0†				

(441) Pyribencarb

◎ Residue definition : Sum of KIE-9749 and pyribencarb, expressed as Pyribencarb

Pear	0.3	Peach	0.3	Apple	0.05
Cucumber	0.5	Grape	1.0		

* Annotation 1. Wheat flour is the food prepared by cleaning, conditioning, grinding, sieving, and

Annotation 2. Tea(dried product) is made from the buds or leaves of Camellia sinensis in Theaceae and

Annotation 3. It should be applied to standards of other agricultural products when the standards of the

Annotation 4. Maximum residue limits for pesticide in (dried) vegetables that may be used as food

Annotation 5. Green tea extract means the powder product manufactured by treating the leaves of Camellia

Annotation 6. For agricultural products marked "*" in the above specifications, the same requirements

Annotation 7. Standards of dried red pepper should be applied when the agricultural chemical is detected

Annotation 8. Bokbunja includes rasberry and wild berries.

Annotation 9. ‘Soy bean' in agricultural products set to pesticide maximum residue limits in Annex 4.

Annotation 10. Agricultural products marked with an cross mark mean their pesticiede MRL(maximum

Annex 5. Maximum Residue Limits for Pesticides in Ginseng

Commodity	ppm	Commodity	ppm	Commodity	ppm

(1) DDT

◎ Residue definition : Sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-TDE(DDD)

Fresh Ginseng	0.01	Red Ginseng	0.05	Red Ginseng Extract	0.1
Dried Ginseng	0.05	Ginseng Extract	0.1		

(2) Metalaxyl

◎ Residue definition : Metalaxyl

Fresh Ginseng	0.5	Red Ginseng	0.5	Red Ginseng Extract	2.0
Dried Ginseng	0.5	Ginseng Extract	2.0		

(3) BHC：Sum of α, β, γ and δ-BHC

◎ Residue definition : Sum of α, β and δ-BHC

Fresh Ginseng	0.01	Red Ginseng	0.05	Red Ginseng Extract	0.1
Dried Ginseng	0.05	Ginseng Extract	0.1		

(4) Aldrin & Dieldrin

◎ Residue definition : Sum of aldrin and dieldrin

Fresh Ginseng	0.01	Red Ginseng	0.05	Red Ginseng Extract	0.1
Dried Ginseng	0.05	Ginseng Extract	0.1		

(5) Endrin

◎ Residue definition : Sum of endrin and δ-keto-endrin

Fresh Ginseng	0.01	Red Ginseng	0.05	Red Ginseng Extract	0.1
Dried Ginseng	0.05	Ginseng Extract	0.1		

(6) Carbendazim

◎ Residue definition : Sum of benomyl, carbendazim and thiophanate-methyl, expressed as carbendazim

Fresh Ginseng	0.2	Red Ginseng	0.5	Red Ginseng Extract	2.0
Dried Ginseng	0.5	Ginseng Extract	2.0		

(7) Quintozene

◎ Residue definition : Quintozene

Fresh Ginseng	0.1	Red Ginseng	0.5	Red Ginseng Extract	1.0
Dried Ginseng	0.5	Ginseng Extract	1.0		

(8) Diethofencarb

◎ Residue definition : Diethofencarb

Fresh Ginseng	0.3	Red Ginseng	0.3	Red Ginseng Extract	2.0
Dried Ginseng	0.3	Ginseng Extract	2.0		

(9) Difenoconazole

◎ Residue definition : Difenoconazole

Fresh Ginseng	0.5	Red Ginseng	0.5	Red Ginseng Extract	0.5
Dried Ginseng	0.5	Ginseng Extract	0.5		

(10) Cypermethrin

◎ Residue definition : Cypermethrin(Sum of isomers)

Fresh Ginseng	0.1	Red Ginseng	0.1	Red Ginseng Extract	0.3
Dried Ginseng	0.1	Ginseng Extract	0.3		

(11) Azoxystrobin

◎ Residue definition : Azoxystrobin

Fresh Ginseng	0.1	Red Ginseng	0.5	Red Ginseng Extract	0.5
Dried Ginseng	0.5	Ginseng Extract	0.5		

(12) Tolylfluanid

◎ Residue definition : Tolyfluanid

Fresh Ginseng	0.2	Red Ginseng	0.01	Red Ginseng Extract	0.01
Dried Ginseng	0.2	Ginseng Extract	0.01		

(13) Tolclofos-methyl

◎ Residue definition : Tolclofos-methyl

Fresh Ginseng	1.0	Red Ginseng	2.0	Red Ginseng Extract	3.0
Dried Ginseng	2.0	Ginseng Extract	3.0		

(14) Iminoctadine

◎ Residue definition : Iminoctadine

Fresh Ginseng	0.1	Red Ginseng	0.2	Red Ginseng Extract	0.5
Dried Ginseng	0.2	Ginseng Extract	0.5		

(15) Pyrimethanil

◎ Residue definition : Pyrimethanil

Fresh Ginseng	1.0	Red Ginseng	0.3	Red Ginseng Extract	1.0
Dried Ginseng	0.3	Ginseng Extract	1.0		

(16) Fenhexamid

◎ Residue definition : Fenhexamid

Fresh Ginseng	0.3	Red Ginseng	0.3	Red Ginseng Extract	2.0
Dried Ginseng	0.3	Ginseng Extract	2.0		

(17) Cyazofamid

◎ Residue definition : Cyazofamid

Fresh Ginseng	0.3	Red Ginseng	0.3	Red Ginseng Extract	1.0
Dried Ginseng	0.3	Ginseng Extract	1.0		

(18) Cyprodinil

◎ Residue definition : Cyprodinil

Fresh Ginseng	2.0	Red Ginseng	2.0	Red Ginseng Extract	5.0
Dried Ginseng	2.0	Ginseng Extract	5.0		

(19) Kresoxim-methyl

◎ Residue definition : Kresoxim-methyl

Fresh Ginseng	0.2	Red Ginseng	0.1	Red Ginseng Extract	1.0
Dried Ginseng	1.0	Ginseng Extract	2.0		

(20) Dithiocarbamates*

◎ Residue definition : Sum of dithiocarbamates

Fresh Ginseng	0.3

(21) Cadusafos*

◎ Residue definition : Cadusafos

Dried Ginseng	0.2	Ginseng Extract	0.1
Fresh Ginseng	0.05	Red Ginseng Extract	0.1

(22) Pencycuron*

◎ Residue definition : Pencycuron

fresh Ginseng	0.7

(23) Fludioxonil

◎ Residue definition : Fludioxonil

Dried Ginseng	1.0	Ginseng Extract	3.0	Red Ginseng Extract	3.0
Fresh Ginseng	0.5	Red Ginseng	1.0		

(24) Carbosulfan

◎ Residue definition : Sum of carbofuran and 3-hydroxycarbofuran, expressed as carbosulfan

This follows the maximum residue limit of agricultural chemical for individual agricultural product in (66) Carbosulfan

(25) Thifluzamide*

◎ Residue definition :Thifluzamide

Dried Ginseng	2.0	Ginseng Extract	2.0
Fresh Ginseng	1.0	Red Ginseng Extract	2.0

(26) Flutolanil*

◎ Residue definition : Flutolanil

Fresh Ginseng	1.0	Ginseng Extract	4.0

(27) Tebupirimfos*

◎ Residue definition :Tebupirimfos

Fresh Ginseng	0.01

(28) Trifloxystrobin

◎ Residue definition : Trifloxystrobin

Dried Ginseng	0.2	Ginseng Extract	0.2	Red Ginseng Extract	0.2
Fresh Ginseng	0.1	Red Ginseng	0.2		

(29) Boscalid

◎ Residue definition : Boscalid

Fresh Ginseng	0.3

(30) Dimethomorph

◎ Residue definition : Sum of E and Z isomers of Dimethomorph

Dried Ginseng	15	Fresh Ginseng	3.0	Red Ginseng	10

(31) Chlorothalonil*

◎ Residue definition : Chlorothalonil

Fresh Ginseng	0.1

(32) Tefluthrin*

◎ Residue definition : Tefluthrin

Fresh Ginseng	0.1	Ginseng Extract	0.3

(33) *Fluquinconazole

◎ Residue definition : Fluquinconazole

Dried Ginseng	0.5	Ginseng Extract	0.5	Red Ginseng	0.5
Fresh Ginseng	0.2				

(34) Pyraclostrobin

◎ Residue definition : Pyraclostrobin

Fresh Ginseng	2.0

(35) Amitraz

◎ Residue definition : Amitraz

Fresh Ginseng	0.05

(36) Buprofezin

◎ Residue definition : Buprofezin

Fresh Ginseng	0.07

(37) Cyhalothrin

◎ Residue definition : Sum of isomers

Fresh Ginseng	0.05

(38) Flusilazole

◎ Residue definition : Flusilazole

Fresh Ginseng	0.07

(39) Prochloraz

◎ Residue definition : Sum of prochloraz and its metabolites containing the 2,4,6-Trichlorophenol moiety

Fresh Ginseng	0.3

(40) Dithianon

◎ Residue definition : Dithianon

Fresh Ginseng	0.2

(41) Cymoxanil*

◎ Residue definition : Cymoxanil

Fresh Ginseng	0.2

(42) Clothianidin

◎ Residue definition : Clothianidin

Fresh Ginseng	0.2

(43) Thiametoxam

◎ Residue definition : Thiamethoxam

Fresh Ginseng	0.1

(44) Ethaboxam

◎ Residue definition : Ethaboxam

Fresh Ginseng	0.2

(45) Cyfluthrin

◎ Residue definition : Cyfluthrin (Sum of isomers)

Dried Ginseng	0.7	Ginseng Extract	1.0	Red Ginseng Extract	0.3
Fresh Ginseng	0.1	Red Ginseng	0.5		

(46) Fluazinam

◎ Residue definition : Fluazinam

Ginseng, fresh(dried ginseng)	0.7

(47) Tebuconazole

◎ Residue definition : Tebuconazole

Dried Ginseng	1.0	Fresh Ginseng	0.5

(48) Mandipropamid

◎ Residue definition : Mandipropamid

Ginseng, fresh(dried ginseng)	0.1

(49) Methoxyfenozide

◎ Residue definition : Methoxyfenozide

Fresh Ginseng	0.2

(50) Metconazole

◎ Residue definition : Metconazole

Fresh Ginseng	1.0

(51) Bifenthrin

◎ Residue definition : Bifenthrin

Ginseng, fresh(dried ginseng)	0.5

(52) Sethoxydim

◎ Residue definition : Sethoxydim

Ginseng, fresh(dried ginseng) 0.05

(53) Emamectin benzoate

◎ Residue definition : MRLs for emamectin benzoate are established for the sum of residues of emamectin benzoate

Ginseng, fresh(dried ginseng) 0.05

(54) Etridiazole

◎ Residue definition : Etridiazole

Fresh Ginseng 3.0

(55) Thiacloprid

◎ Residue definition : Thiacloprid

Ginseng, fresh(dried ginseng) 0.1

(56) Propamocarb

◎ Residue definition : Propamocarb

Dried Ginseng 1.0 Fresh Ginseng 0.5

(57) Hexaconazole

◎ Residue definition : Hexaconazole

Ginseng, fresh(dried ginseng) 0.5

(58) Fluopicolide

◎ Residue definition : Fluopicolide

Ginseng, fresh(dried ginseng) 0.1

(59) Triflumizole

◎ Residue definition :Triflumizole

Fresh Ginseng 0.1

(60) Fosetyl-aluminium

◎ Residue definition : Fosetyl-aluminium

Fresh Ginseng 2.0

(61) Simeconazole

◎ Residue definition : Simeconazole

Ginseng, fresh(dried ginseng)	0.7

(62) Amisulbrom

◎ Residue definition : Amisulbrom

Ginseng, fresh(dried ginseng)	0.3

(63) Acetamiprid

◎ Residue definition : Acetamiprid

Ginseng, fresh(dried ginseng)	0.1

(64) Chlorfenapyr

◎ Residue definition : Chlorfenapyr

Fresh Ginseng	0.1

(65) Dinotefuran

◎ Residue definition : Dinotefuran

Fresh Ginseng	0.05

(66) Carbofuran

◎ Residue definition : Sum of Carbofuran and 3-hydroxycarbofuran, expressed as carbofuran

Fresh Ginseng	0.1	Red Ginseng	0.2	Red Ginseng Extract	0.3
Dried Ginseng	0.5	Ginseng Extract	0.7		

(67) Clethodim*

◎ Residue definition : Sum of clethodim and its metabolites containing 5-(2-ethylthiopropyl)cyclohexene-3-one and

Fresh Ginseng	0.05

(68) Iprovalicarb

◎ Residue definition : Iprovalicarb

Ginseng, fresh(dried ginseng)	0.1

(69) Lindane, γ-BHC

◎ Residue definition : γ-BHC

Fresh Ginseng	0.01	Red Ginseng	0.05	Red Ginseng Extract	0.1
Dried Ginseng	0.05	Ginseng Extract	0.1		

(70) Benalaxyl

◎ Residue definition : Benalaxyl

Dried Ginseng	0.05	Fresh Ginseng	0.05

(71) Captan

◎ Residue definition : Captan

Dried Ginseng	0.05	Fresh Ginseng	0.05

(72) Terbufos

◎ Residue definition : Sum of terbufos, its oxygen analogue and their sulfoxides and sulfones, expressed as terbufos

Dried Ginseng	0.3	Fresh Ginseng	0.05

(73) Spinetoram

◎ Residue definition : Spinetoram

Dried Ginseng	0.05	Fresh Ginseng	0.05

(74) Sulfoxaflor

◎ Residue definition : Sulfoxaflor

Dried Ginseng	0.05	Fresh Ginseng	0.05

(75) Fluxapyroxad

◎ Residue definition : Fluxapyroxad

Dried Ginseng	0.2	Fresh Ginseng	0.05

(76) Famoxadone

◎ Residue definition : Famoxadone

Dried Ginseng	0.3	Fresh Ginseng	0.05

(77) Ametoctradin

◎ Residue definition : Ametoctradin

Dried Ginseng	0.05	Fresh Ginseng	0.05

(78) Picoxystrobin

◎ Residue definition : Picoxystrobin

Dried Ginseng	0.5	Fresh Ginseng	0.3

Annotation 1: If any agricultural chemicals marked "*" in the above specifications are detected in ginseng products

[Annex 6] Maximum Residue Limits for Pesticides in Livestock

Commodity	ppm	Commodity	ppm	Commodity	ppm
(1) γ- BHC					
Cattle Meat	2.0(f)	Goat Meat	2.0(f)	Poultry Meat	2.0(f)
Egg	0.1	Pig Meat	2.0(f)	Sheep Meat	2.0(f)
(2) Glyphosate					
Poultry Meat	0.1	Cattle Meat	0.1	Cow's milk	0.1
Pig Meat	0.1	Cattle by-product	2.0	Egg	0.1
Pig by-product	1.0				
(3) Diazinon					
Chicken Meat	0.02	Chicken's Egg	0.02	Pig Meat	0.7(f)
Chicken by-product	0.02	Milk	0.02(F)	Sheep Meat	0.7(f)
Cattle Meat	0.7(f)				
(4) Pyriproxyfen					
Cattle Meat	0.01(f)	Goat Meat	0.01(f)	Goat by-product	0.01
Cattle by-product	0.01				
(5) DDT : Sum of p,p'-DDT, o,p'-DDT, p,p'-DDD and p,p'-DDE					
Poultry Meat	0.3(f)	Milk	0.02(F)	Egg	0.1
Mammalia Meat	5.0(f)				
(6) Dimethipin					
Poultry Meat	0.01	Mammalia by-product	0.01	Mammalia Meat	0.01
Poultry by-product	0.01	Milk	0.01	Egg	0.01
(7) Diquat					
Poultry Meat	0.05	Mammalia by-product	0.05	Mammalia Meat	0.05
Poultry by-product	0.05	Milk	0.01	Egg	0.05

(8) Dichlorvos

Poultry Meat	0.05	Mammalia Meat	0.05	Milk	0.02

(9) Diflubenzuron

Poultry Meat	0.05	Mammalia Meat	0.05	Milk	0.05
Egg	0.05				

(10) Methomyl

Mammalia Meat	0.02	Milk	0.02		

(11) Methiocarb

Poultry Meat	0.05	Cattle Meat	0.05	Sheep Meat	0.05
Pig Meat	0.05	Horse Meat	0.05	Goat Meat	0.05

(12) Mecarbam

Cattle Meat	0.01				

(13) Methamidofos

Cattle Meat	0.01	Goat Meat	0.01	Sheep Meat	0.01
Cattle fat	0.01	Goat fat	0.01	Sheep fat	0.01
Milk	0.01				

(14) Methacrifos

Poultry Meat	0.01				

(15) Methoprene

Mammalia Meat	0.2(f)	Cow's milk	0.05(F)	Egg	0.05
Mammalia by-product	0.1				

(16) Methidathion

Poultry Meat	0.02	Sheep Meat	0.02	Cattle Meat	0.02
Poultry by-product	0.02	Sheep by-product	0.02	Cattle by-product	0.02
Poultry fat	0.02	Sheep fat	0.02	Cattle fat	0.02
Pig Meat	0.02	Deer Meat	0.02	Goat Meat	0.02
Pig by-product	0.02	Milk	0.001	Goat by-product	0.02
Pig fat	0.02	Egg	0.02	Goat fat	0.02

(17) Monocrotofos

Poultry Meat	0.02	Sheep Meat	0.02	Cattle Meat	0.02
Pig Meat	0.02	Goat Meat	0.02		

(18) Bendiocarb

Poultry Meat	0.05	Cattle kidney	0.2	Cattle Meat	0.05
Poultry by-product	0.05	Cattle fat	0.05	Cattle by-product	0.05
Poultry fat	0.05	Milk	0.05	Egg	0.05

(19) Vinclozolin

Chicken Meat	0.05	Cattle Meat	0.05	Chicken's Egg	0.05
Cow's milk	0.05				

(20) Cyromazine

Poultry Meat	0.05	Milk	0.01	Sheep Meat	0.05
Egg	0.2				

(21) Cypermethrin

Poultry Meat	0.05	Mammalia Meat	0.2(f)	Egg	0.05
Milk	0.05(F)	Mammalia by-product	0.05		

(22) Cyhexatin

Mammalia Meat	0.2	Milk Product	0.05	Milk	0.05

(23) Acephate

Cattle fat	0.1	Milk	0.1	Poultry fat	0.1
Cattle Meat	0.1	Pig fat	0.1	Poultry Meat	0.1
Egg	0.1	Pig Meat	0.1		

(24) Azocyclotin

Mammalia Meat	0.2	Milk Product	0.05	Milk	0.05

(25) Aldrin & Dieldrin

Poultry Meat	0.2(f)	Milk	0.006(F)	Mammalia Meat	0.2(f)
Egg	0.1				

(26) Aldicarb

Mammalia Meat	0.01	Milk	0.01		

(27) Edifenfos

Cattle Meat	0.02	Poultry Meat	0.2		

(28) Ethiofencarb

Cattle Meat	0.02	Pig Meat	0.02	Poultry Meat	0.02

(29) Ethion

Poultry Meat	0.2(f)	Cattle Meat	2.5(f)	Horse Meat	0.2(f)
Pig Meat	0.2(f)	Sheep Meat	0.2(f)	Goat Meat	0.2(f)

(30) Etrimfos

Cattle Meat	0.01	Poultry Meat	0.02		

(31) Endosulfan (including α,β and Endosulfansulfate)

Poultry Meat	1	Cattle Meat	0.1	Horse Meat	0.1
Pig Meat	0.1	Sheep Meat	0.1	Goat Meat	0.1

(32) Endrin

Poultry Meat	0.05	Milk	0.01	Mammalia Meat	0.05
Egg	0.01				

(33) 2, 4 - D

Poultry Meat	0.05	Milk	0.01	Mammalia Meat	0.05
Egg	0.01				

(34) 2, 4, 5 - T

Pig Meat	0.05	Sheep Meat	0.05	Cattle Meat	0.05
Horse Meat	0.05	Goat Meat	0.05		

(35) Isofenphos

Poultry Meat	0.02	Cattle Meat	0.02	Horse Meat	0.02
Pig Meat	0.02	Sheep Meat	0.02	Goat Meat	0.02

(36) Chinomethionate

Pig Meat	0.05	Sheep Meat	0.05	Cattle Meat	0.05
Horse Meat	0.05	Goat Meat	0.05		

(37) Carbaryl

Poultry Meat	0.5	Goat Meat	0.2	Cattle Meat	0.2
Poultry skin	5.0	Milk	0.1	Sheep Meat	0.2
Pig Meat	0.2	Milk Product	0.1	Egg	0.5

(38) Carbendazim

Poultry Meat	0.1	Milk	0.1	Sheep Meat	0.1
Cattle Meat	0.1	Egg	0.1		

(39) Carbofuran

Pig Meat	0.05	Cattle fat	0.05	Goat Meat	0.05
Pig by-product	0.05	Sheep Meat	0.05	Goat by-product	0.05
Pig fat	0.05	Sheep by-product	0.05	Goat fat	0.05
Horse Meat	0.05	Sheep fat	0.05	Milk	0.05
Horse by-product	0.05	Deer Meat	0.05	Cattle by-product	0.05
Horse fat	0.05	Cattle Meat	0.05		

(40) Clofentezine

Poultry Meat	0.05	Cattle by-product	0.1	Egg	0.05
Poultry by-product	0.05	Cattle Meat	0.05	Cow's milk	0.01

(41) Chlordane

Poultry Meat	0.5(f)	Milk	0.002(F)	Mammalia Meat	0.5(f)
Egg	0.02				

(42) Chlorfenvinphos

Pig Meat	0.2	Sheep Meat	0.2	Cattle Meat	0.2
Horse Meat	0.2	Goat Meat	0.2		

(43) Chlorpyrifos

Poultry Meat	0.01(f)	Cattle kidney	0.01	Sheep Meat	1.0(f)
Poultry by-product	0.01	Cattle liver	0.01	Sheep by-product	0.01
Pig Meat	0.02(f)	Cattle Meat	1.0(f)	Milk	0.02
Pig by-product	0.01	Egg	0.01		

(44) Chlorpyrifos methyl

Chicken Meat	0.05	Cattle by-product	0.05	Milk	0.01
Chicken by-product	0.05	Cattle fat	0.05	Egg	0.05
Chicken fat	0.05	Cattle Meat	0.05		

(45) Terbufos

Cattle Meat	0.05	Chicken Meat	0.05

(46) Triadimefon

Poultry Meat	0.05	Milk	0.05	Mammalia Meat	0.05
Egg	0.05				

(47) Fenpyroximate

Cattle liver	0.01	Cattle kidney	0.01	Cow's milk	0.005(F)
Cattle Meat	0.02(f)				

(48) Paraquat

Pig Meat	0.05	Sheep Meat	0.05	Cattle Meat	0.05
Pig by-product	0.05	Sheep by-product	0.05	Cattle by-product	0.05
Pig kidney	0.5	Sheep kidney	0.5	Cattle kidney	0.5
Egg	0.01	Milk	0.01		

(49) Permethrin

Mammalia Meat	1.0(f)	Poultry Meat	0.1	Milk	0.1(F)
Mammalia by-product	0.1	Poultry Meat	0.1	Egg	0.1

(50) Fenitrothion : MEP

Mammalia Meat	0.05(F)	Milk	0.002		

(51) Fenvalerate

Mammalia by-product	0.02	Mammalia Meat	1.0(f)	Milk	0.1(F)

(52) Fenbutatin oxide

Chicken Meat	0.05	Mammalia by-product	0.2	Milk	0.05
Chicken by-product	0.05	Mammalia Meat	0.05	Egg	0.05

(53) Fensulfothion

Pig Meat	0.02	Cattle Meat	0.02	Sheep Meat	0.02
Horse Meat	0.02	Goat Meat	0.02		

(54) Fenthion

Pig Meat	0.1	Cattle Meat	0.1	Milk	0.01

(55) Phenthoate

Cattle Meat	0.05

(56) Phorate

Mammalia Meat	0.05				

(57) Phosalone

Sheep Meat	0.05				

(58) Phosmet

Cattle Meat	1.0				

(59) Flumethrin

Cattle Meat	0.2(f)	Cow' Milk	0.05(F)		

(60) Flusilazole

Chicken Meat	0.01	Cattle fat	0.01	Cow's milk	0.01
Chicken by-product	0.01	Cattle Meat	0.01	Chicken's Egg	0.01
Cattle by-product	0.02				

(61) Prochloraz

Cattle Meat	0.1	Cattle fat	0.5	Cattle by-product	5.0
Milk	0.05				

(62) Propargite

Poultry Meat	0.1(f)	Mammalia Meat	0.1(f)	Milk	0.1(F)
Egg	0.1				

(63) Propoxur

Mammalia Meat	0.05				

(64) Propiconazole

Poultry Meat	0.05	Mammalia Meat	0.05	Milk	0.01
Egg	0.05	Mammalia by-product	0.05		

(65) Pirimicarb

Mammalia Meat	0.05	Milk	0.05	Egg	0.05

(66) Pirimiphos-methyl

Mammalia Meat	0.05	Milk	0.05	Egg	0.05

(67) Heptachlor : Sum of heptachlor & heptachlor epoxide

Poultry Meat	0.2(f)	Mammalia Meat	0.2(f)	Milk	0.006(F)
Egg	0.05				

(68) Dimethoate

Poultry Meat	0.05	Horse Meat	0.05	Sheep Meat	0.05
Poultry by-product	0.05	Cattle Meat	0.05	Sheep by-product	0.05
Poultry fat	0.05	Cattle by-product	0.05	Goat Meat	0.05
Pig Meat	0.05	Mammalia fat	0.05	Milk	0.05
Egg	0.05				

(69) Disulfoton

Poultry Meat	0.02	Milk	0.01	Chicken's Egg	0.02

(70) Diphenylamine

Cattle kidney	0.01	Cattle liver	0.05	Cattle Meat	0.01(f)

(71) Myclobutanil

Poultry Meat	0.1	Cattle by-product	0.1	Cow's milk	0.1
Poultry by-product	0.1	Cattle Meat	0.1	Egg	0.1

(72) Bioresmethrin

Mammalia by-product	0.01	Mammalia Meat	0.5(f)		

(73) Bifenthrin

Chicken Meat	0.05(f)	Cattle liver	0.05	Cattle fat	0.5
Chicken by-product	0.05	Cattle Meat	0.5(f)	Milk	0.05
Chicken fat	0.05	Cattle kidney	0.05	Chicken's Egg	0.01

(74) Profenfos

Mammalia Meat	0.05	Milk	0.01	Egg	0.02

(75) Quintozene

Chicken Meat	0.1	Chicken by-product	0.1	Egg	0.03

(76) Kresoxim-methyl

Poultry Meat	0.05	Mammalia fat	0.05	Cow's milk	0.01
Mammalia Meat	0.05	Mammalia by-product	0.05		

(77) Triadimenol

Poultry Meat	0.05	Milk	0.01	Mammalia Meat	0.05
Egg	0.05				

(78) Triazophos

Cattle Meat	0.01	Cow' Milk	0.01		

(79) Fenarimol

Cattle kidney	0.02	Cattle liver	0.02	Cattle Meat	0.02

(80) Fenbuconazole

Poultry Meat	0.05	Cattle kidney	0.05	Cattle fat	0.05
Poultry by-product	0.05	Cattle liver	0.05	Cow's milk	0.05
Poultry fat	0.05	Cattle Meat	0.05	Egg	0.05

(81) Penconazole

Chicken Meat	0.05	Cattle Meat	0.05	Cow's milk	0.01
Chicken's Egg	0.05	Cattle by-product	0.05		

(82) Fenpropathrin

Poultry Meat	0.02(f)	Cattle by-product	0.05	Cow's milk	0.1(F)
Poultry by-product	0.01	Cattle Meat	0.5(f)	Egg	0.01

Annotation 1: (f) : Fat basis(The residue content in fatty tissue or fat cut off meat)
Annotation 2: (F) : Milk products with a fat content of 2% or more are expressed on a fat basis. The MRL would be 25 times the MRL for milk. The MRL for milk products with a fat content lower than 2% are considered to be half the value for milk and are expressed on a whole product basis.

[Annex 7] Maximum Residue Limits for Veterinary Drugs in Foods

Commodity	ppm	Commodity	ppm	Commodity	ppm
(1) Gentamicin					
Cattle, fat	0.1	Chicken, muscle	0.1		
Cattle, kidney	5.0	Milk	0.2		
Cattle, liver	2.0	Pig, fat	0.1		
Cattle, muscle	0.1	Pig, kidney	5.0		
Chicken, fat	0.1	Pig, liver	2.0		
Chicken, kidney	0.1	Pig, mucle	0.1		
Chicken, liver	0.1				
(2) Nicarbazin					
Chicken, fat/skin	0.2				
Chicken, kidney	0.2				
Chicken, liver	0.2				
Chicken, muscle	0.2				
(3) Neomycin					
Cattle, fat	0.5	Egg	0.5	Sheep, fat	0.5
Cattle, kidney	10.0	Goat, fat	0.5	Sheep, kidney	10.0
Cattle, liver	0.5	Goat, kidney	10.0	Sheep, liver	0.5
Cattle, muscle	0.5	Goat, liver	0.5	Sheep, muscle	0.5
Chicken, fat	0.5	Goat, muscle	0.5	Turkey, fat	0.5
Chicken, kidney	10.0	Honey	0.1	Turkey, kidney	10.0
Chicken, liver	0.5	Milk	0.5	Turkey, liver	0.5
Chicken, muscle	0.5	Pig, fat	0.5	Turkey, muscle	0.5

Duck, fat	0.5	Pig, kidney	10.0		
Duck, kidney	10.0	Pig, liver	0.5		
Duck, liver	0.5	Pig, muscle	0.5		
Duck, muscle	0.5				

(4) Novobiocin

Cattle, meat	1.0	Duck, meat	1.0	Turkey, meat	1.0
Chicken, meat	1.0				

(5) Danofloxacin

Cattle, fat	0.1	Chicken, fat	0.1	Pig, fat	0.1
Cattle, kidney	0.4	Chicken, kidney	0.4	Pig, kidney	0.2
Cattle, liver	0.4	Chicken, liver	0.4	Pig, liver	0.05
Cattle, muscle	0.2	Chicken, muscle	0.2	Pig, muscle	0.1

(6) Decoquinate

Cattle, meat	2.0	Chicken, meat	2.0	Goat, meat	2.0

(7) Doramectin

Cattle, fat	0.15	Pig, fat	0.15
Cattle, kidney	0.03	Pig, kidney	0.03
Cattle, liver	0.1	Pig, liver	0.1
Cattle, muscle	0.01	Pig, muscle	0.005
Milk	0.015		

(8) Diminazene

Cattle, muscle	0.5	Milk	0.15
Cattle, kidney	6.0		
Cattle, liver	12		

(9) Diclazuril

Chicken, fat/skin	1.0	Rabbit, fat	1.0	Turkey, fat/skin	1.0
Chicken, kidney	2.0	Rabbit, kidney	2.0	Turkey, kidney	2.0
Chicken, liver	3.0	Rabbit, liver	3.0	Turkey, liver	3.0
Chicken, muscle	0.5	Rabbit, muscle	0.5	Turkey, muscle	0.5
Duck, fat/skin	1.0	Sheep, fat	1.0		
Duck, kidney	2.0	Sheep, kidney	2.0		
Duck, liver	3.0	Sheep, liver	3.0		
Duck, muscle	0.5	Sheep, muscle	0.5		

(10) Dihydrostreptomycin/Streptomycin

Cattle, fat	0.6	Honey	ND	Sheep, fat	0.6
Cattle, kidney	1.0	Milk	0.2	Sheep, kidney	1.0
Cattle, liver	0.6	Pig, fat	0.6	Sheep, liver	0.6
Cattle, muscle	0.5	Pig, kidney	1.0	Sheep, muscle	0.6
Chicken, fat	0.6	Pig, liver	0.6		
Chicken, kidney	1.0	Pig, muscle	0.6		
Chicken, liver	0.6				
Chicken, muscle	0.6				

(11) Levamisole

Cattle, fat	0.01	Duck, fat	0.01	Sheep, fat	0.01
Cattle, kidney	0.01	Duck, kidney	0.01	Sheep, kidney	0.01
Cattle, liver	0.1	Duck, liver	0.1	Sheep, liver	0.1
Cattle, muscle	0.01	Duck, muscle	0.01	Sheep, muscle	0.01
Chicken, fat	0.01	Pig, fat	0.01	Turkey, fat	0.01
Chicken, kidney	0.01	Pig, kidney	0.01	Turkey, kidney	0.01
Chicken, liver	0.1	Pig, liver	0.1	Turkey, liver	0.1
Chicken, muscle	0.01	Pig, muscle	0.01	Turkey, muscle	0.01

(12) Monensin

Cattle, fat	0.05	Milk	0.01	Poultry, fat	0.05
Cattle, kidney	0.05	Pig, fat	0.05	Poultry, kidney	0.05
Cattle, liver	0.05	Pig, kidney	0.05	Poultry, liver	0.05
Cattle, muscle	0.05	Pig, liver	0.05	Poultry, muscle	0.05
Goat, fat	0.05	Pig, muscle	0.05		
Goat, kidney	0.05				
Goat, liver	0.05				
Goat, muscle	0.05				

(13) Moxidectin

Cattle, fat	0.5	Deer, fat	0.5	Sheep, fat	0.5
Cattle, kidney	0.05	Deer, kidney	0.05	Sheep, kidney	0.05
Cattle, liver	0.1	Deer, liver	0.1	Sheep, liver	0.1
Cattle, muscle	0.02	Deer, muscle	0.02	Sheep, muscle	0.05

(14) Bacitracin

Cattle, fat	0.5	Pig, fat	0.5	Poultry, fat	0.5
Cattle, kidney	0.5	Pig, kidney	0.5	Poultry, kidney	0.5
Cattle, liver	0.5	Pig, liver	0.5	Poultry, liver	0.5
Cattle, muscle	0.5	Pig, muscle	0.5	Poultry, muscle	0.5
Egg	0.5				
Milk	0.1				

(15) Virginiamycin

Cattle, fat	0.2	Pig, fat	0.3
Cattle, kidney	0.2	Pig, kidney	0.3
Cattle, liver	0.2	Pig, liver	0.3
Cattle, muscle	0.1	Pig, muscle	0.1
Egg	0.1	Poultry, fat	0.2
Milk	0.1	Poultry, kidney	0.2
		Poultry, liver	0.2
		Poultry, muscle	0.1

(16) Benzylpenicillin/Procaine benzylpenicillin

Cattle, kidney	0.05	Chicken, kidney	0.05	Milk	0.004
Cattle, liver	0.05	Chicken, liver	0.05	Pig, kidney	0.05
Cattle, muscle	0.05	Chicken, muscle	0.05	Pig, liver	0.05
		Egg	0.004	Pig, muscle	0.05

(17) Salinomycin

Cattle, fat	0.02	Pig, fat	0.1
Cattle, kidney	0.5	Pig, kidney	0.1
Cattle, liver	0.4	Pig, liver	0.2
Cattle, muscle	0.02	Pig, muscle	0.1
Egg	0.02	Poultry, fat	0.4
		Poultry, kidney	0.5
		Poultry, liver	0.5
		Poultry, muscle	0.1

(18) Sum of Sulfonamides, Sulfachlorpyridazine, Sulfadiazine, Sulfadimethoxine, Sulfamethoxypyridazine,

Cattle, fat	0.1	Goat, fat	0.1	Rabbit, fat	0.1
Cattle, kidney	0.1	Goat, kidney	0.1	Rabbit, kidney	0.1
Cattle, liver	0.1	Goat, liver	0.1	Rabbit, liver	0.1
Cattle, muscle	0.1	Goat, muscle	0.1	Rabbit, muscle	0.1
Chicken, fat	0.1	Horse, fat	0.1	Sheep, fat	0.1
Chicken, kidney	0.1	Horse, kidney	0.1	Sheep, kidney	0.1
Chicken, liver	0.1	Horse, liver	0.1	Sheep, liver	0.1
Chicken, muscle	0.1	Horse, muscle	0.1	Sheep, muscle	0.1
Deer, fat	0.1	Milk	0.1	Turkey, fat	0.1
Deer, kidney	0.1	Pig, fat	0.1	Turkey, kidney	0.1
Deer, liver	0.1	Pig, kidney	0.1	Turkey, liver	0.1
Deer, muscle	0.1	Pig, liver	0.1	Turkey, muscle	0.1
Duck, fat	0.1	Pig, muscle	0.1		
Duck, kidney	0.1				

Duck, liver	0.1
Duck, muscle	0.1
Egg	ND
Fish	0.1

(19) Ceftiofur

Cattle, fat	2.0	Milk	0.1
Cattle, kidney	6.0	Pig, fat	2.0
Cattle, liver	2.0	Pig, kidney	6.0
Cattle, muscle	1.0	Pig, liver	2.0
		Pig, muscle	1.0

(20) Spectinomycin

Cattle, fat	2.0	Egg	2.0	Sheep, fat	2.0
Cattle, kidney	5.0	Milk	0.2	Sheep, kidney	5.0
Cattle, liver	2.0	Pig, fat	2.0	Sheep, liver	2.0
Cattle, muscle	0.5	Pig, kidney	5.0	Sheep, muscle	0.5
Chicken, fat	2.0	Pig, liver	2.0		
Chicken, kidney	5.0	Pig, muscle	0.5		
Chicken, liver	2.0				
Chicken, muscle	0.5				

(21) Spiramycin

Cattle, fat	0.3	Chicken, fat	0.3	Fish	0.2
Cattle, kidney	0.3	Chicken, kidney	0.8	Milk	0.2
Cattle, liver	0.6	Chicken, liver	0.6	Pig, fat	0.3
Cattle, muscle	0.2	Chicken, muscle	0.2	Pig, kidney	0.3
		Crustacea	0.2	Pig, liver	0.6
				Pig, muscle	0.2

(22) Amoxicillin

Cattle, meat	0.01	Crustacea	0.05	Fish	0.05

(23) Albendazol

Cattle, fat	0.1	Duck, fat	0.1	Pig, fat	0.1
Cattle, kidney	5.0	Duck, kidney	5.0	Pig, kidney	5.0
Cattle, liver	5.0	Duck, liver	5.0	Pig, liver	5.0
Cattle, muscle	0.1	Duck, muscle	0.1	Pig, muscle	0.1
Chicken, fat	0.1	Goat, fat	0.1	Rabbit, fat	0.1
Chicken, kidney	5.0	Goat, kidney	5.0	Rabbit, kidney	5.0
Chicken, liver	5.0	Goat, liver	5.0	Rabbit, liver	5.0
Chicken, muscle	0.1	Goat, muscle	0.1	Rabbit, muscle	0.1

Deer, fat	0.1	Horse, fat	0.1	Sheep, fat	0.1
Deer, kidney	5.0	Horse, kidney	5.0	Sheep, kidney	5.0
Deer, liver	5.0	Horse, liver	5.0	Sheep, liver	5.0
Deer, muscle	0.1	Horse, muscle	0.1	Sheep, muscle	0.1
		Milk	0.1	Turkey, fat	0.1
				Turkey, kidney	5.0
				Turkey, liver	5.0
				Turkey, muscle	0.1

(24) Amprolium

Cattle, meat	0.5	Crustacea	0.05	Pig, meat	0.01
Cattle, meat	0.01	Fish	0.05	Turkey, meat	0.5
Chicken, meat	0.5				

(25) Ampicillin

Cattle, meat	0.01	Pig, meat	0.01	Fish	0.05
Crustacea	0.05				

(26) Erythromycin

Cattle, fat	0.05	Milk	0.04	Rabbit, fat	0.05
Cattle, kidney	0.05	Pig, fat	0.05	Rabbit, kidney	0.05
Cattle, liver	0.05	Pig, kidney	0.05	Rabbit, liver	0.05
Cattle, muscle	0.05	Pig, liver	0.05	Rabbit, muscle	0.05
Crustacea	0.2	Pig, muscle	0.05	Sheep, fat	0.05
Egg	0.05	Poultry, fat	0.1	Sheep, kidney	0.05
Fish	0.2	Poultry, kidney	0.1	Sheep, liver	0.05
Goat, fat	0.05	Poultry, liver	0.1	Sheep, muscle	0.05
Goat, kidney	0.05	Poultry, muscle	0.1		
Goat, liver	0.05				
Goat, muscle	0.05				

(27) Ethopabate

Chicken, meat	0.5

(28) Enrofloxacin; Sum of Ciprofloxacin

Cattle, fat	0.1	Milk	0.05	Rabbit, fat	0.1
Cattle, kidney	0.2	Pig, fat	0.1	Rabbit, kidney	0.3
Cattle, liver	0.3	Pig, kidney	0.3	Rabbit, liver	0.2
Cattle, muscle	0.1	Pig, liver	0.2	Rabbit, muscle	0.1
Crustacea	0.1	Pig, muscle	0.1	Sheep, fat	0.1
Egg	ND	Poultry, fat	0.1	Sheep, kidney	0.2
Fish	0.1	Poultry, kidney	0.3	Sheep, liver	0.3

Goat, fat	0.1	Poultry, liver	0.2	Sheep, muscle	0.1
Goat, kidney	0.2	Poultry, muscle	0.1		
Goat, liver	0.3				
Goat, muscle	0.1				

(29) Ormethoprim

Chicken, meat	0.1	Duck, meat	0.1	Turkey, meat	0.1

(30) Oxolinic acid

Cattle, meat	0.05	Chicken, liver	0.15	Fish	0.1
Chicken, fat	0.05	Chicken, muscle	0.1	Pig, meat	0.05
Chicken, kidney	0.15	Crustacea	0.1		

(31) Oxytetracycline /Chlortetracycline /Tetracycline

abalone	0.2	Egg	0.4	Rabbit, kidney	1.2
Cattle, kidney	1.2	Fish	0.2	Rabbit, liver	0.6
Cattle, liver	0.6	Goat, kidney	1.2	Rabbit, muscle	0.2
Cattle, muscle	0.2	Goat, liver	0.6	Sheep, kidney	1.2
Chicken, kidney	1.2	Goat, muscle	0.2	Sheep, liver	0.6
Chicken, liver	0.6	Honey(Oxytetracycline)	0.3	Sheep, muscle	0.2
Chicken, muscle	0.2	Milk	0.1	Turkey, kidney	1.2
Crustacea	0.2	Pig, kidney	1.2	Turkey, liver	0.6
Deer, kidney	1.2	Pig, liver	0.6	Turkey, muscle	0.2
Deer, liver	0.6	Pig, muscle	0.2		
Deer, muscle	0.2				

(32) Oleandomycin

Chicken, meat	0.15	Pig, meat	0.15	Turkey, meat	0.15

(33) Ivermectin

Cattle, fat	0.04	Pig, fat	0.02	Sheep, fat	0.02
Cattle, liver	0.1	Pig, liver	0.015	Sheep, liver	0.015
Milk	0.01				

(34) Isometamidium

Cattle, fat	0.1	Cattle, muscle	0.1		
Cattle, kidney	1.0	Milk	0.1		
Cattle, liver	0.5				

(35) Zeranol

Cattle, liver	0.01	Chicken, meat	3.0		
Cattle, muscle	0.002	Turkey, meat	3.0		

(36) Zoalene

Chicken, meat	3	Turkey, meat	3

(37) Thiabendazole

Cattle, fat	0.1	Milk	0.1	Sheep, fat	0.1
Cattle, kidney	0.1	Pig, fat	0.1	Sheep, kidney	0.1
Cattle, liver	0.1	Pig, kidney	0.1	Sheep, liver	0.1
Cattle, muscle	0.1	Pig, liver	0.1	Sheep, muscle	0.1
Goat, fat	0.1	Pig, muscle	0.1		
Goat, kidney	0.1				
Goat, liver	0.1				
Goat, muscle	0.1				

(38) Closantel

Cattle, fat	3.0	Cattle, muscle	1.0	Sheep, liver	1.5
Cattle, kidney	3.0	Sheep, fat	2.0	Sheep, muscle	1.5
Cattle, liver	1.0	Sheep, kidney	5.0		

(39) Clopidol

Cattle, fat	0.2	Pig, fat	0.2	Sheep, fat	0.2
Cattle, kidney	3.0	Pig, kidney	0.2	Sheep, kidney	3.0
Cattle, liver	2.0	Pig, liver	0.2	Sheep, liver	2.0
Cattle, muscle	0.2	Pig, muscle	0.2	Sheep, muscle	0.2
Goat, fat	0.2	Poultry, fat	5.0		
Goat, kidney	3.0	Poultry, kidney	20		
Goat, liver	2.0	Poultry, liver	20		
Goat, muscle	0.2	Poultry, muscle	5.0		
Milk	0.02				

(40) Tylosin

Cattle, fat	0.1	Pig, fat	0.1	Poultry, fat	0.1
Cattle, kidney	0.1	Pig, kidney	0.1	Poultry, kidney	0.1
Cattle, liver	0.1	Pig, liver	0.1	Poultry, liver	0.1
Cattle, muscle	0.1	Pig, muscle	0.1	Poultry, muscle	0.1
Egg	0.2				
Milk	0.05				

(41) Triclabendazole

Cattle, fat	0.1	Sheep, fat	0.1		
Cattle, kidney	0.3	Sheep, kidney	0.1		
Cattle, liver	0.3	Sheep, liver	0.1		
Cattle, muscle	0.2	Sheep, muscle	0.1		

(42) Thiamphenicol

Cattle, meat	0.5	Chicken, meat	0.5	Pig, meat	0.5

(43) Tilmicosin

Cattle, fat	0.1	Pig, fat	0.1	Sheep, fat	0.1
Cattle, kidney	0.3	Pig, kidney	1.0	Sheep, kidney	0.3
Cattle, liver	1.0	Pig, liver	1.5	Sheep, liver	1.0
Cattle, muscle	0.1	Pig, muscle	0.1	Sheep, muscle	0.1

(44) Febantel/Fenbendazole/Oxfendazole

Cattle, fat	0.1	Horse, fat	0.1	Sheep, fat	0.1
Cattle, kidney	0.1	Horse, kidney	0.1	Sheep, kidney	0.1
Cattle, liver	0.5	Horse, liver	0.5	Sheep, liver	0.5
Cattle, muscle	0.1	Horse, muscle	0.1	Sheep, muscle	0.1
Goat, fat	0.1	Milk	0.1		
Goat, kidney	0.1	Pig, fat	0.1		
Goat, liver	0.5	Pig, kidney	0.1		
Goat, muscle	0.1	Pig, liver	0.5		
		Pig, muscle	0.1		

(45) Flubendazole

Chicken, liver	0.5	Egg	0.4	Turkey, liver	0.5
Chicken, muscle	0.2	Pig, liver	0.01	Turkey, muscle	0.2
Duck, liver	0.5	Pig, muscle	0.01		
Duck, muscle	0.2				

(46) Fluazuron

Cattle, fat	7.0	Cattle, liver	0.5
Cattle, kidney	0.5	Cattle, muscle	0.2

(47) Hygromycin B

Chicken, meat	ND	Pig, meat	ND

(48) Flumequin

Cattle, fat	0.3	Pig, fat	0.3	Sheep, fat	0.3
Cattle, kidney	1.5	Pig, kidney	1.5	Sheep, kidney	1.5
Cattle, liver	0.5	Pig, liver	0.5	Sheep, liver	0.5
Cattle, muscle	0.2	Pig, muscle	0.2	Sheep, muscle	0.2
Crustacea	0.5	Poultry, fat	0.3		
Fish	0.5	Poultry, kidney	1.0		
		Poultry, liver	0.8		
		Poultry, muscle	0.4		

(49) Doxycycline

Cattle, fat	0.1	Milk	ND	Sheep, fat	0.1
Cattle, kidney	0.6	Pig, fat	0.1	Sheep, kidney	0.6
Cattle, liver	0.3	Pig, kidney	0.6	Sheep, liver	0.3
Cattle, muscle	0.1	Pig, liver	0.3	Sheep, muscle	0.1
Egg	ND	Pig, muscle	0.1		
Fish	0.05	Poultry, fat	0.1		
Goat, fat	0.1	Poultry, kidney	0.6		
Goat, kidney	0.6	Poultry, liver	0.3		
Goat, liver	0.3	Poultry, muscle	0.1		
Goat, muscle	0.1				

(50) Amitraz

Honey	0.2	Pig, fat	0.4	Sheep, fat	0.4
Cattle, fat	0.2	Pig, kidney	0.2	Sheep, kidney	0.2
Cattle, kidney	0.2	Pig, liver	0.2	Sheep, liver	0.1
Cattle, liver	0.2	Pig, muscle	0.05	Sheep, muscle	0.05
Cattle, muscle	0.05			Milk	0.01

(51) Coumaphos

Honey	0.1

(52) Flumethrin

Honey	0.01

(53) Fluvalinate

Honey	0.05

(54) Norfloxacin

Stock farm products(Milk, Egg included), Fish and Crustacea	ND

(55) Ofloxacin

Stock farm products(Milk, Egg included), Fish and Crustacea	ND

(56) Pefloxacin

Stock farm products(Milk, Egg included), Fish and Crustacea	ND

(57) Narasin

Egg	ND	Poultry, liver	0.3
Poultry, fat	0.5	Poultry, muscle	0.1
Poultry, kidney	0.3		

(58) Lasalocid

Cattle, fat	0.02	Egg	0.05	Poultry, fat	0.02
Cattle, kidney	0.02	Milk	0.01	Poultry, kidney	0.02
Cattle, liver	0.02			Poultry, liver	0.02
Cattle, muscle	0.02			Poultry, muscle	0.02

(59) Lincomycin

Cattle, fat	0.05	Fish	0.1	Poultry, fat	0.1
Cattle, kidney	1	Milk	0.15	Poultry, kidney	0.5
Cattle, liver	0.5	Pig, fat	0.1	Poultry, liver	0.5
Cattle, muscle	0.1	Pig, kidney	1.5	Poultry, muscle	0.2
Crustacea	0.1	Pig, liver	0.5		
Egg	0.05	Pig, muscle	0.2		

(60) Maduramycin

Egg	ND
Poultry, fat	0.4
Poultry, kidney	1
Poultry, liver	0.8
Poultry, muscle	0.1

(61) Bambermycin, Flavomycin, Flavophospholipol

Cattle, fat	0.01	Chicken, fat	0.03	Pig, fat	0.01
Cattle, kidney	0.01	Chicken, kidney	0.03	Pig, kidney	0.01
Cattle, liver	0.01	Chicken, liver	0.03	Pig, liver	0.01
Cattle, muscle	0.01	Chicken, muscle	0.03	Pig, muscle	0.01
		Egg	0.02		
		Milk	0.01		

(62) Semduramicin

Egg	ND
Poultry, fat	0.5
Poultry, kidney	0.2
Poultry, liver	0.5
Poultry, muscle	0.1

(63) Avilamycin

Pig, fat	0.05	Poultry, fat	0.05
Pig, kidney	0.05	Poultry, kidney	0.05
Pig, liver	0.05	Poultry, liver	0.05
Pig, muscle	0.05	Poultry, muscle	0.05

(64) Apramycin

Cattle, fat	1	Pig, fat	0.1	Poultry, fat	0.2
Cattle, kidney	10	Pig, kidney	0.1	Poultry, kidney	0.8
Cattle, liver	6	Pig, liver	0.1	Poultry, liver	0.8
Cattle, muscle	0.5	Pig, muscle	0.1	Poultry, muscle	0.2

(65) Enramycin

Chicken, fat	0.03	Pig, fat	0.03
Chicken, kidney	0.03	Pig, kidney	0.03
Chicken, liver	0.03	Pig, liver	0.03
Chicken, muscle	0.03	Pig, muscle	0.03

(66) Colistin

Cattle, fat	0.15	Milk	0.05	Sheep, fat	0.15
Cattle, kidney	0.2	Pig, fat	0.15	Sheep, kidney	0.2
Cattle, liver	0.15	Pig, kidney	0.2	Sheep, liver	0.15
Cattle, muscle	0.15	Pig, liver	0.15	Sheep, muscle	0.15
Crustacea	0.15	Pig, muscle	0.15		
Egg	0.3	Poultry, fat	0.15		
Fish	0.15	Poultry, kidney	0.2		
Goat, fat	0.15	Poultry, liver	0.15		
Goat, kidney	0.2	Poultry, muscle	0.15		
Goat, liver	0.15				
Goat, muscle	0.15				

(67) Tiamulin

Cattle, fat	0.1	Pig, fat	0.08	Sheep, fat	0.1
Cattle, kidney	0.5	Pig, kidney	0.04	Sheep, kidney	0.5
Cattle, liver	0.5	Pig, liver	0.5	Sheep, liver	0.5
Cattle, muscle	0.1	Pig, muscle	0.1	Sheep, muscle	0.1
Egg	1	Poultry, fat	0.1		

Goat, fat	0.1	Poultry, kidney	0.1		
Goat, kidney	0.5	Poultry, liver	0.2		
Goat, liver	0.5	Poultry, muscle	0.1		
Goat, muscle	0.1				

(68) Deltamethrin

Cattle, fat	0.5	Chicken, fat	0.5	Milk	0.03
Cattle, kidney	0.05	Chicken, kidney	0.05	Sheep, fat	0.5
Cattle, liver	0.05	Chicken, liver	0.05	Sheep, kidney	0.05
Cattle, muscle	0.03	Chicken, muscle	0.03	Sheep, liver	0.05
Fish	0.03	Egg	0.03	Sheep, muscle	0.03

(69) Sarafloxacin

Poultry, fat	0.02	Poultry, liver	0.08		
Poultry, kidney	0.08	Poultry, muscle	0.01		

(70) Cyfluthrin

Cattle, muscle	0.02	Cattle, fat	0.2	Milk	0.04
Cattle, liver	0.02	Cattle, kidney	0.02		

(71) Abamectin

Cattle, fat	0.1	Pig, fat	0.01		
Cattle, kidney	0.05	Pig, kidney	0.01		
Cattle, liver	0.1	Pig, liver	0.01		
Cattle, muscle	0.01	Pig, muscle	0.01		

(72) Azaperone

Pig, fat	0.06	Pig, liver	0.1		
Pig, kidney	0.1	Pig, muscle	0.06		

(73) Eprinomectin

Cattle, fat	0.25	Cattle, liver	2.0	Milk	0.02
Cattle, kidney	0.3	Cattle, muscle	0.1		

(74) Imidocarb

Cattle, muscle	0.3	Sheep, fat	0.05		
Cattle, fat	0.05	Sheep, kidney	2		
Cattle, kidney	2	Sheep, liver	1.5		

Cattle, liver	1.5	Sheep, muscle	0.3		
Milk	0.05				

(75) Trichlorfon, Metrifonate

Cattle, fat	0.05	Pig, fat	0.1	Sheep, fat	0.1
Cattle, kidney	0.05	Pig, kidney	0.1	Sheep, kidney	0.1
Cattle, liver	0.05	Pig, liver	0.1	Sheep, liver	0.1
Cattle, muscle	0.05	Pig, muscle	0.1	Sheep, muscle	0.1
Milk	0.05				

(76) Phoxim

Cattle, fat	0.4	Pig, fat	0.4		
Cattle, kidney	0.05	Pig, kidney	0.05		
Cattle, liver	0.05	Pig, liver	0.05		
Cattle, muscle	0.05	Pig, muscle	0.05		
Goat, fat	0.4	Sheep, fat	0.4		
Goat, kidney	0.05	Sheep, kidney	0.05		
Goat, liver	0.05	Sheep, liver	0.05		
Goat, muscle	0.05	Sheep, muscle	0.05		

(77) Trenbolone acetate

Cattle, muscle	0.002

(78) Carazolol

Pig, fat	0.005	Pig, liver	0.025		
Pig, kidney	0.025	Pig, muscle	0.005		

(79) Phenylbutazone

Cattle, fat	ND	Pig, fat	ND	Poultry, fat	ND
Cattle, kidney	ND	Pig, kidney	ND	Poultry, kidney	ND
Cattle, liver	ND	Pig, liver	ND	Poultry, liver	ND
Cattle, muscle	ND	Pig, muscle	ND	Poultry, muscle	ND

(80) Nafcillin

Cattle, fat	0.3	Sheep, fat	0.3	Goat, fat	0.3
Cattle, kidney	0.3	Sheep, kidney	0.3	Goat, kidney	0.3
Cattle, liver	0.3	Sheep, liver	0.3	Goat, liver	0.3
Cattle, muscle	0.3	Sheep, muscle	0.3	Goat, muscle	0.3
Milk	0.03				

(81) Nalidixic acid

Cattle, fat	0.03	Fish	0.03		
Cattle, kidney	0.03				
Cattle, liver	0.03				
Cattle, muscle	0.03				

(82) Dicloxacillin

Cattle, fat	0.3	Sheep, fat	0.3	Goat, fat	0.3
Cattle, kidney	0.3	Sheep, kidney	0.3	Goat, kidney	0.3
Cattle, liver	0.3	Sheep, liver	0.3	Goat, liver	0.3
Cattle, muscle	0.3	Sheep, muscle	0.3	Goat, muscle	0.3
Milk	0.03	Poultry, fat	0.3	Horse, fat	0.3
Pig, fat	0.3	Poultry, kidney	0.3	Horse, kidney	0.3
Pig, kidney	0.3	Poultry, liver	0.3	Horse, liver	0.3
Pig, liver	0.3	Poultry, muscle	0.3	Horse, muscle	0.3
Pig, muscle	0.3				

(83) Difloxacin

Cattle, fat	0.1	Sheep, fat	0.1	Goat, fat	0.1
Cattle, kidney	0.8	Sheep, kidney	0.8	Goat, kidney	0.8
Cattle, liver	1.4	Sheep, liver	1.4	Goat, liver	1.4
Cattle, muscle	0.4	Sheep, muscle	0.4	Goat, muscle	0.4
Pig, fat	0.1	Poultry, fat	0.4	Fish	0.3
Pig, kidney	0.8	Poultry, kidney	0.6	Crustacea	0.3
Pig, liver	0.8	Poultry, liver	1.9		
Pig, muscle	0.4	Poultry, muscle	0.3		

(84) Marbofloxacin

Cattle, fat	0.05	Pig, fat	0.05	Milk	0.075
Cattle, kidney	0.15	Pig, kidney	0.15		
Cattle, liver	0.15	Pig, liver	0.15		
Cattle, muscle	0.15	Pig, muscle	0.15		

(85) Cefacetrile

Milk	0.05

(86) Cefazolin

Cattle, fat	0.05	Sheep, fat	0.05	Milk	0.05
Cattle, kidney	0.05	Sheep, kidney	0.05		
Cattle, liver	0.05	Sheep, liver	0.05		

Cattle, muscle	0.05	Sheep, muscle	0.05		
Pig, fat	0.05	Goat, fat	0.05		
Pig, kidney	0.05	Goat, kidney	0.05		
Pig, liver	0.05	Goat, liver	0.05		
Pig, muscle	0.05	Goat, muscle	0.05		

(87) Cephapirin

Cattle, fat	0.05	Milk	0.03
Cattle, kidney	0.1		
Cattle, muscle	0.05		

(88) Cefalexin

Cattle, fat	0.2	Sheep, fat	0.2	Deer, fat	0.2
Cattle, kidney	1.0	Sheep, kidney	1.0	Deer, kidney	1.0
Cattle, liver	0.2	Sheep, liver	0.2	Deer, liver	0.2
Cattle, muscle	0.2	Sheep, muscle	0.2	Deer, muscle	0.2
Pig, fat	0.2	Goat, fat	0.2	Fish	0.2
Pig, kidney	1.0	Goat, kidney	1.0	Milk	0.1
Pig, liver	0.2	Goat, liver	0.2		
Pig, muscle	0.2	Goat, muscle	0.2		
Chicken, fat	0.2	Horse, fat	0.2		
Chicken, kidney	1.0	Horse, kidney	1.0		
Chicken, liver	0.2	Horse, liver	0.2		
Chicken, muscle	0.2	Horse, muscle	0.2		

(89) Cefalonium

Cattle, fat	0.01	Milk	0.01
Cattle, kidney	0.01		
Cattle, liver	0.01		
Cattle, muscle	0.01		

(90) Cefoperazone

Milk	0.03

(91) Cefuroxime

Cattle, fat	0.02	Milk	0.02
Cattle, kidney	0.02		
Cattle, liver	0.02		
Cattle, muscle	0.02		

(92) Cefquinome

Cattle, fat	0.05	Pig, fat	0.05	Horse, fat	0.05
Cattle, kidney	0.2	Pig, kidney	0.2	Horse, kidney	0.2
Cattle, liver	0.1	Pig, liver	0.1	Horse, liver	0.1
Cattle, muscle	0.05	Pig, muscle	0.05	Horse, muscle	0.05
Milk	0.02				

(93) Orbifloxacin

Cattle, fat	0.02	Pig, fat	0.02	Milk	0.02
Cattle, kidney	0.02	Pig, kidney	0.02		
Cattle, liver	0.02	Pig, liver	0.02		
Cattle, muscle	0.02	Pig, muscle	0.02		

(94) Oxibendazole

Cattle, fat	0.5	Pig, fat	0.5	Milk	0.03
Cattle, kidney	0.1	Pig, kidney	0.1	Egg	0.03
Cattle, liver	0.2	Pig, liver	0.2		
Cattle, muscle	0.1	Pig, muscle	0.1		

(95) Josamycin

Pig, fat	0.04	Poultry, fat	0.04	Fish	0.05
Pig, kidney	0.04	Poultry, kidney	0.04		
Pig, liver	0.04	Poultry, liver	0.04		
Pig, muscle	0.04	Poultry, muscle	0.04		

(96) Kanamycin

Cattle, fat	0.1	Poultry, fat	0.1	Goat, fat	0.1
Cattle, kidney	2.5	Poultry, kidney	2.5	Goat, kidney	2.5
Cattle, liver	0.6	Poultry, liver	0.6	Goat, liver	0.6
Cattle, muscle	0.1	Poultry, muscle	0.1	Goat, muscle	0.1
Pig, fat	0.1	Sheep, fat	0.1	Milk	0.1
Pig, kidney	2.5	Sheep, kidney	2.5	Egg	0.5
Pig, liver	0.6	Sheep, liver	0.6		
Pig, muscle	0.1	Sheep, muscle	0.1		

(97) Clavulanic acid

Cattle, fat	0.1	Pig, fat	0.1	Milk	0.2
Cattle, kidney	0.4	Pig, kidney	0.4		
Cattle, liver	0.2	Pig, liver	0.2		
Cattle, muscle	0.1	Pig, muscle	0.1		

(98) Cloxacillin

Cattle, fat	0.3	Poultry, fat	0.3	Goat, fat	0.3
Cattle, kidney	0.3	Poultry, kidney	0.3	Goat, kidney	0.3
Cattle, liver	0.3	Poultry, liver	0.3	Goat, liver	0.3
Cattle, muscle	0.3	Poultry, muscle	0.3	Goat, muscle	0.3
Milk	0.03	Sheep, fat	0.3	Horse, fat	0.3
Pig, fat	0.3	Sheep, kidney	0.3	Horse, kidney	0.3
Pig, kidney	0.3	Sheep, liver	0.3	Horse, liver	0.3
Pig, liver	0.3	Sheep, muscle	0.3	Horse, muscle	0.3
Pig, muscle	0.3				

(99) Kitasamycin

Cattle, fat	0.2	Pig, fat	0.2	Poultry, fat	0.2
Cattle, kidney	0.2	Pig, kidney	0.2	Poultry, kidney	0.2
Cattle, liver	0.2	Pig, liver	0.2	Poultry, liver	0.2
Cattle, muscle	0.2	Pig, muscle	0.2	Poultry, muscle	0.2
Fish	0.2			Egg	0.2

(100) Florfenicol

Cattle, kidney	0.3	Poultry, fat	0.75	Goat, kidney	0.3
Cattle, liver	3.0	Poultry, kidney	0.2	Goat, liver	3.0
Cattle, muscle	0.2	Poultry, liver	2.5	Goat, muscle	0.2
Pig, fat	0.5	Poultry, muscle	0.1	Fish	0.2
Pig, kidney	0.5	Sheep, kidney	0.3	Crustacea	0.1
Pig, liver	2.0	Sheep, liver	3.0		
Pig, muscle	0.3	Sheep, muscle	0.2		

(101) Ractopamine

Cattle, fat	0.01	Pig, fat	0.01
Cattle, kidney	0.09	Pig, kidney	0.09
Cattle, liver	0.04	Pig, liver	0.04
Cattle, muscle	0.01	Pig, muscle	0.01
		Pig, lung	0.09

(102) Melengestrol acetate

Cattle, fat	0.018
Cattle, kidney	0.002
Cattle, liver	0.01
Cattle, muscle	0.001

(103) Trimethoprim

Cattle, fat	0.05	Poultry, fat	0.05	Goat, fat	0.05
Cattle, kidney	0.05	Poultry, kidney	0.05	Goat, kidney	0.05
Cattle, liver	0.05	Poultry, liver	0.05	Goat, liver	0.05
Cattle, muscle	0.05	Poultry, muscle	0.05	Goat, muscle	0.05
Pig, fat	0.05	Sheep, fat	0.05	Horse, fat	0.1
Pig, kidney	0.05	Sheep, kidney	0.05	Horse, kidney	0.1
Pig, liver	0.05	Sheep, liver	0.05	Horse, liver	0.1
Pig, muscle	0.05	Sheep, muscle	0.05	Horse, muscle	0.1
Milk	0.05	Egg	0.02	Fish	0.05
Crustacea	0.05				

(104) Clindamycin

Eel	0.1	Flat fish	0.1

(105) Praziquantel

Jacofever	0.02

(106) Flunixin

Cattle, fat	0.1	Pig, fat	0.01	Horse, fat	0.02
Cattle, kidney	0.03	Pig, kidney	0.03	Horse, kidney	0.2
Cattle, liver	0.2	Pig, liver	0.2	Horse, liver	0.1
Cattle, muscle	0.02	Pig, muscle	0.05	Horse, muscle	0.01
Milk	0.02				

(107) Meloxicam

Cattle, kidney	0.065	Pig, kidney	0.065	Milk	0.015
Cattle, liver	0.065	Pig, liver	0.065		
Cattle, muscle	0.02	Pig, muscle	0.02		

(108) Prednisolone

Cattle, fat	0.004	Sheep, fat	0.004	Horse, fat	0.004
Cattle, kidney	0.01	Sheep, kidney	0.01	Horse, kidney	0.01
Cattle, liver	0.01	Sheep, liver	0.01	Horse, liver	0.01
Cattle, muscle	0.004	Sheep, muscle	0.004	Horse, muscle	0.004
Pig, fat	0.004	Goat, fat	0.004	Rabbit, fat	0.004
Pig, kidney	0.01	Goat, kidney	0.01	Rabbit, kidney	0.01
Pig, liver	0.01	Goat, liver	0.01	Rabbit, liver	0.01
Pig, muscle	0.004	Goat, muscle	0.004	Rabbit, muscle	0.004
Milk	0.006				

(109) Valnemulin

Pig, kidney	0.1
Pig, liver	0.5
Pig, muscle	0.05

(110) Robenidine

Poultry, fat	0.2
Poultry, kidney	0.1
Poultry, liver	0.1
Poultry, muscle	0.1

(111) Toltrazuril

Cattle, fat	0.15	Pig, fat	0.15	Poultry, fat	0.2
Cattle, kidney	0.25	Pig, kidney	0.25	Poultry, kidney	0.4
Cattle, liver	0.5	Pig, liver	0.5	Poultry, liver	0.6
Cattle, muscle	0.1	Pig, muscle	0.1	Poultry, muscle	0.1

(112) Diaveridine

Poultry, fat	0.05
Poultry, kidney	0.05
Poultry, liver	0.05
Poultry, muscle	0.05

(113) Dexamethasone

Cattle, kidney	0.001	Sheep, kidney	0.001	Horse, kidney	0.001
Cattle, liver	0.002	Sheep, liver	0.002	Horse, liver	0.002
Cattle, muscle	0.001	Sheep, muscle	0.001	Horse, muscle	0.001
Pig, kidney	0.001	Goat, kidney	0.001	Poultry, kidney	0.001
Pig, liver	0.002	Goat, liver	0.002	Poultry, liver	0.001
Pig, muscle	0.001	Goat, muscle	0.001	Poultry, muscle	0.001
Milk	0.0003			Egg	0.0001

(114) Mebendazole

Pig, fat	0.06	Horse, fat	0.06	Poultry, fat	0.06
Pig, kidney	0.06	Horse, kidney	0.06	Poultry, kidney	0.06
Pig, liver	0.4	Horse, liver	0.4	Poultry, liver	0.4
Pig, muscle	0.06	Horse, muscle	0.06	Poultry, muscle	0.06

(115) Nitroxinil

Cattle, fat	0.2	Sheep, fat	0.2

Cattle, kidney	0.4	Sheep, kidney	0.4		
Cattle, liver	0.2	Sheep, liver	0.02		
Cattle, muscle	0.4	Sheep, muscle	0.4		

(116) Clorsulon

Cattle, kidney	0.2
Cattle, liver	0.1
Cattle, muscle	0.035

(117) Tolfenamic acid

Cattle, kidney	0.1	Pig, kidney	0.1	Milk	0.05
Cattle, liver	0.4	Pig, liver	0.4		
Cattle, muscle	0.05	Pig, muscle	0.1		

(118) Tulathromycin

Cattle, fat	0.1	Pig, fat	0.1
Cattle, kidney	3.0	Pig, kidney	3.0
Cattle, liver	3.0	Pig, liver	3.0
Cattle, muscle	0.1	Pig, muscle	0.1

(119) Cymiazole

Honey	1.0

(120) Sulpyrine/Dipyrone/Metamizole

Cattle, fat	0.1	Pig, fat	0.1	Horse, fat	0.1
Cattle, kidney	0.1	Pig, kidney	0.1	Horse, kidney	0.1
Cattle, liver	0.1	Pig, liver	0.1	Horse, liver	0.1
Cattle, muscle	0.1	Pig, muscle	0.1	Horse, muscle	0.1
Milk	0.05				

(121) Cypermethrin

Cattle, fat	0.2	Sheep, fat	0.2	Milk	0.1
Cattle, kidney	0.05	Sheep, kidney	0.05		
Cattle, liver	0.05	Sheep, liver	0.05		
Cattle, muscle	0.05	Sheep, muscle	0.05		

(122) Piperazine

Cattle, fat	0.5	Pig, fat	0.5	Poultry, fat	0.1
Cattle, kidney	0.6	Pig, kidney	0.6	Poultry, kidney	0.1

Cattle, liver	1.0	Pig, liver	1.0	Poultry, liver	0.1
Cattle, muscle	0.3	Pig, muscle	0.3	Poultry, muscle	0.1
Milk	0.05				

(123) Amikacin

Cattle, fat	0.1	Pig, fat	0.1	Milk	0.2
Cattle, kidney	2.5	Pig, kidney	2.5		
Cattle, liver	0.6	Pig, liver	0.6		
Cattle, muscle	0.1	Pig, muscle	0.1		

(124) Norgestomet

Cattle, fat	0.0002	Milk	0.0002
Cattle, kidney	0.0002		
Cattle, liver	0.0002		
Cattle, muscle	0.0002		

(125) Rifaximin

Milk	0.06

(126) Zilpaterol

Cattle, kidney	0.010
Cattle, liver	0.005
Cattle, muscle	0.001

(127) Tildipirosin

Cattle, fat	0.2	Pig, fat	0.8
Cattle, kidney	3	Pig, kidney	10
Cattle, liver	2	Pig, liver	5
Cattle, muscle	0.4	Pig, muscle	1.2