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A SURVEY OF JAPAN'S IMPORT REGULATIONS ON FISH AND SHELLFISH PRODUCTS

Sunee C. Sonu
National Marine Fisheries Service

April 1, 1980

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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Philip M. Klutznick, Secretary
National Oceanic and Atmospheric Administration
Richard A. Frank, Administrator
National Marine Fisheries Service
Terry L. Leitzell, Assistant Administrator for Fisheries

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SURVEY OF JAPAN'S IMPORT REGULATIONS ON FISH AND SHELLFISH PRODUCTS

INTRODUCTION

The National Marine Fisheries Service - Industry Trade Mission toured Japan, June 2 - 9, interviewing government and industry representatives, inspection groups and importers, and visiting plants and markets. Laws and regulations governing the importation of seafood products have also been investigated.

This report summarizes the findings of this mission focusing on the import inspection procedures, government regulations on food sanitation and additives, government requirements for labeling, and industry quality standards being applied to seafood products in Japan.

IMPORT INSPECTION PROCEDURES

The Ministry of Health and Welfare (MHW) is charged with the responsibility for inspecting all the incoming seafood products as well as all other foodstuffs which are earmarked for domestic consumption and export. This inspection is mandatory under the Japanese Food Sanitation Law.

The Japanese Food Sanitation Law provides that no imported foodstuff is allowed to pass through Customs without a written permit issued by the Food Sanitation Inspector of the MHW. Currently, there are 15 Food Sanitation Inspection Offices at major ports of entry, staffed by some 50 inspectors.

Once permitted entry, the goods are treated no differently from domestic products. However, the goods in domestic circulation are being spot-checked by prefectural and municipal health authorities which number about 860 throughout Japan. If found to be substandard after internal circulation, the products are withdrawn from sale or destroyed. This authority is administered by prefectural governors (Table 1).

Immediately upon arrival of a consignment, the importer submits the notification, along with necessary documents, to the MHW through the Food Sanitaion Inspection Office at the port of entry (Table 2). One of these documents is a declaration of the name of synthetic chemical compounds (except for flavoring agent) contained as preservative or coloring agent in the food. The inspector then decides whether or not to conduct sampling inspection. Usually, less than about 10 percent of the incoming food products are subjected to sampling inspection at the port of entry (Table 3). Between 1968 - 78, an average of 7 percent of the imported food products have been sample-tested by the MHW Inspectors, and it appears that the sampling rates applied to seafood products have been lower than the average for all the foodstuffs.

Upon notification to the Sanitation Inspection Office, the products are inspected for freshness, various types of bacteria including intestinal types and salmonella, wholesomeness, food additives, and compliance with labeling requirements. If the inspection is passed, the permission for importation is granted and the consignment is allowed to proceed to Customs. If the

inspection is failed, the Director of Customs is notified of the result, and the consignment detained for either (1) returning to the country of origin, (2) destruction, or (3) reconditioning in a bonded factory upon approval by the MHW. In some cases, the goods which have failed in inspection may be imported on certain conditions, namely that they be barred from human consumption.

The goods which pass the inspection following reconditioning treatment are permitted to the Customs, but those which fail are denied entry. According to Table 3, between 1968 - 78, an average of about 9 percent of those subjected to sample inspection was found violative, and the rate has been considerably lower at about 6 percent during the recent 5-year period between 1974 - 78.

Although the MHW inspection is mandatory, voluntary inspections are performed to check quality standards of the products upon request by the importer. These voluntary inspections are conducted by non-governmental organizations, e.g. the Japan Frozen Foods Inspection Corporation or the Japan Canned Food Inspection Corporation under the authority of the Japanese Agricultural Standards (JAS) Law. The inspection is performed on a fee basis.

GOVERNMENT REGULATIONS ON FOOD SANITATION AND ADDITIVES

Pertinent articles of the Japanese Food Sanitation Law governing the sanitation standards and food additives are described in Table 4.

Part of these regulations relating to sanitation standards is common to those in every other country requiring high standards for food sanitation. Namely, the food product being imported must not be rotten, decomposed or immature, and it must not be injurious to human health or unfit for food. The basic content of the food product must not contain any poisonous or detrimental substances, or be suspected of containing any pathogenic microorganisms injurious to human health.

Table 5 lists bacteriological standards for frozen foods being enforced by the MHW. Tests may also be conducted by the Sanitation Inspector for PCB and organic mercury content as well as agricultural chemicals (Table 6 and 7).

Certain types of fish are exempted from this type of inspection, including tuna. The bulk of fish coming into Japan is in frozen form. The MHW regulations require that the temperature during the period of preservation of frozen fish shall be at between 10 and 15 degrees centigrade below zero at all times (during transit as well as at the time of arrival), and that refrigeration records be kept for shipments of frozen products.

The major differences in the Japanese Food Sanitation Law lie in the types and quantities of food preservatives, coloring agents and other additives which it specifies for use. These differing requirements essentially arise from the variations in the Japanese diet. Regulations on food additives also extend to the use of chemical preparation on materials, e.g. chemicals which come in direct contact with the food products and dyes or other substances used in printing food package labels (which might come in contact with food through handling).

Table 8 lists different types of violations reported by the Sanitation Inspectors during 1978. About 22 percent of the violations (206 cases out of the total 943) were related to the use of non-approved food additives.

Paragraph 2 of Article 2 of the Food Sanitation Law defines the "food additive" as follows:

> "In the Law the term additive means anything used by means of adding, mixing, permeating or others in or upon food, etc. in the process of manufacturing food, for the purpose of processing or preserving food."

According to this definition, all substances which are added into food at the stage of processing and manufacturing the food are defined as food additives, except those substances such as sugar and salt which are recognized as food or part of food from old times.

Basically, use of synthetic chemical compounds as food additives is limited to those which have been permitted by the Minister of Health and Welfare, whereas, the natural substances such as a coloring matter contained in a vegetable can be used without permission, except when it is harmful to human health. Synthetic chemical compounds are, according to the definition given by paragraph 3 of Article 2 of the Food Sanitation Law, "all substances obtained by causing a chemical reaction other than degradation reaction to elements or compounds through chemical means." Namely, the natural caffeine extracted from tea leaves can be used as a natural food additive, but the synthetic caffeine cannot be used in Japan as a food additive because it is a synthetic chemical compound.

Food additives and coloring agents which are banned in fish and shellfish products by the MHW are listed in Tables 9 and 10, respectively. Food additives permitted to use specified tolerances and/or restrictions are listed in Table 11. Permitted food additives and coloring agents are listed, respectively, in Tables 12 and 13.

GOVERNMENT REQUIREMENTS FOR LABELING

Japan's Food Sanitation Law also details the requirements for labeling and packaging of food products. The standards of labeling as provided by the Law are described in Tables 14, 15, 16, 17 and 18. For example, the label must contain the date of manufacture or the date of importation as well as the location of the manufacturing plant or the name and location of the importer.

Labeling regulations are more specific and detailed for certain products than others. For example, raw oysters must be labeled to indicate whether they are to be eaten cooked or raw. For canned goods, the names of the main ingredients must be indicated in the label. It should also be noted that when packaging is changed, a new inspection is needed to establish a precedent for further imports.

Table 18 lists the official class-names which are to be indicated in the label when a certain kind of food additive is used on foods, such as processed or frozen foods in packagings or containers. The class-names denote functions of food additives, and the following class-names are frequently used:

Preservative, bactericide, antioxidant, bleaching agent, bodying agent (bulking agent), flavoring agent, insecticide, color fixative, coloring agent, flavor enhancer, acidifier, sweetener, emulsifier, defoaming agent, stabilizer, solvent, leavening agent, film-former, nutrient, extraction solvent, texturizer, etc.

It should be noted that the Japanese classifications sometimes differ from those of other countries. For example, such nutrients as vitamins and amino acids which are originally contained in food, are regarded as additives when they are applied to food to enrich it.

INDUSTRY QUALITY STANDARDS

In addition to the mandatory inspection enforced by the Ministry of Health and Welfare on imported fish and shellfish products, there are voluntary inspections being practiced by industry groups. The industry inspection is performed upon request by the importer or the shipper.

Whereas, the government inspection is primarily concerned over the wholesomeness and health aspects of the products, the industry standards generally focus on quality, but frequently with concurrent requirements for wholesomeness and health standards.

Although the industry standards are essentially voluntary, they may bear a de facto mandatory effect on certain products, as some industry associations expect their members to comply with respective quality grading systems. For instance, the Japan Marine Products Importers Association, a nationwide organization whose members account for approximately 85% of all the marine products imported into Japan, has set forth quality grading standards for shrimp, squid and other species which will be marked on the products during domestic distribution. Also, to increase consumer acceptance in Japan, the purchaser may wish to obtain a JAS mark on the products being imported. A JAS mark is issued as the government assurance of acceptable minimum quality in accordance to the standards prescribed by the Japanese Agricultural Standards Law. The function of performing the inspection on seafood products being offered for importation into Japan is performed by the Japan Frozen Foods Inspection Corporation and the Japan Canned Foods Inspection Corporation, both for the industry and JAS standards.

Industry standards for fish and shellfish products are presented in Tables 19, 20, 21, 22, 23, 24 and 25.

TABLE 1

FOOD SANITATION ADMINISTRATION

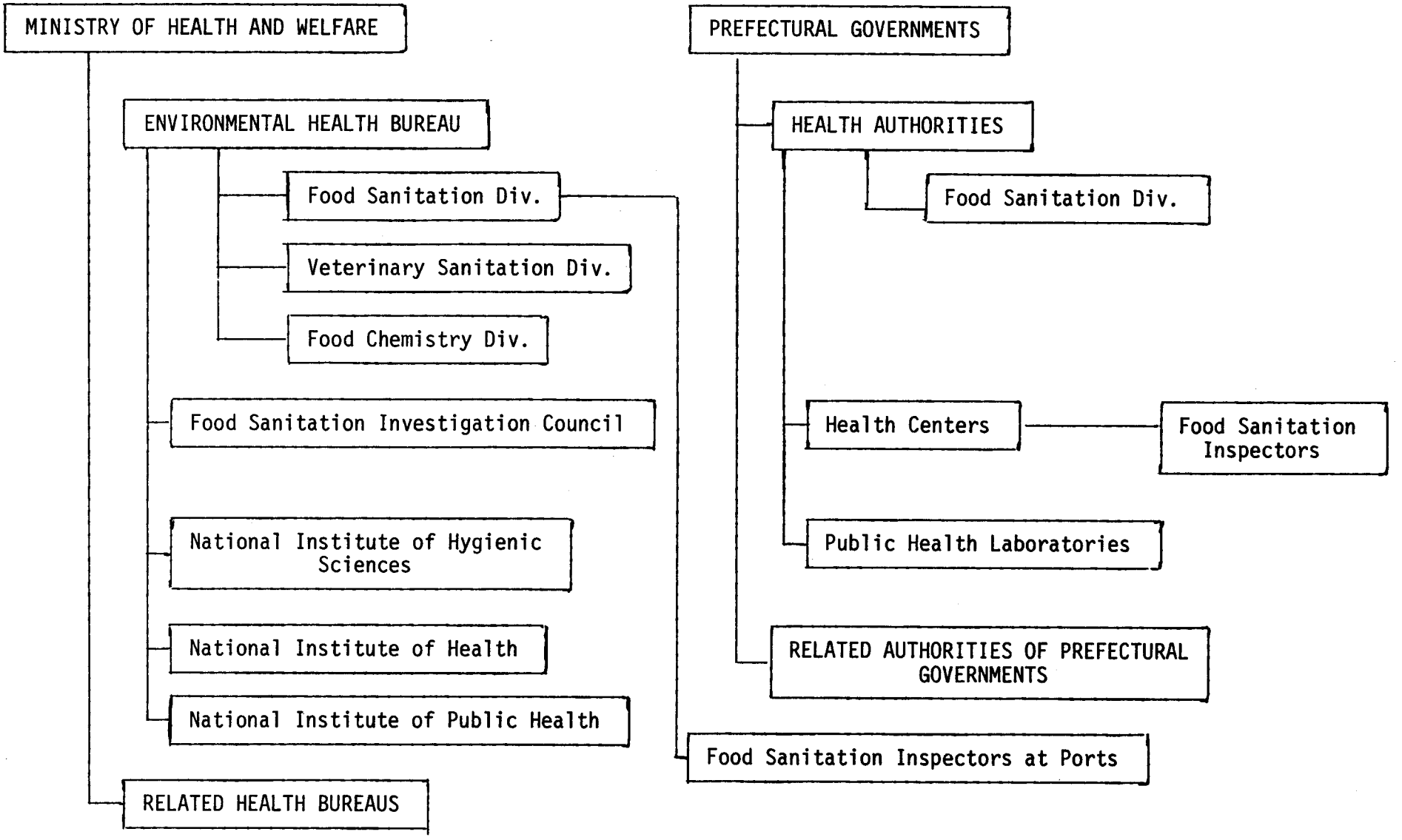

TABLE 2

IMPORTED FOOD INSPECTION PROCEDURE

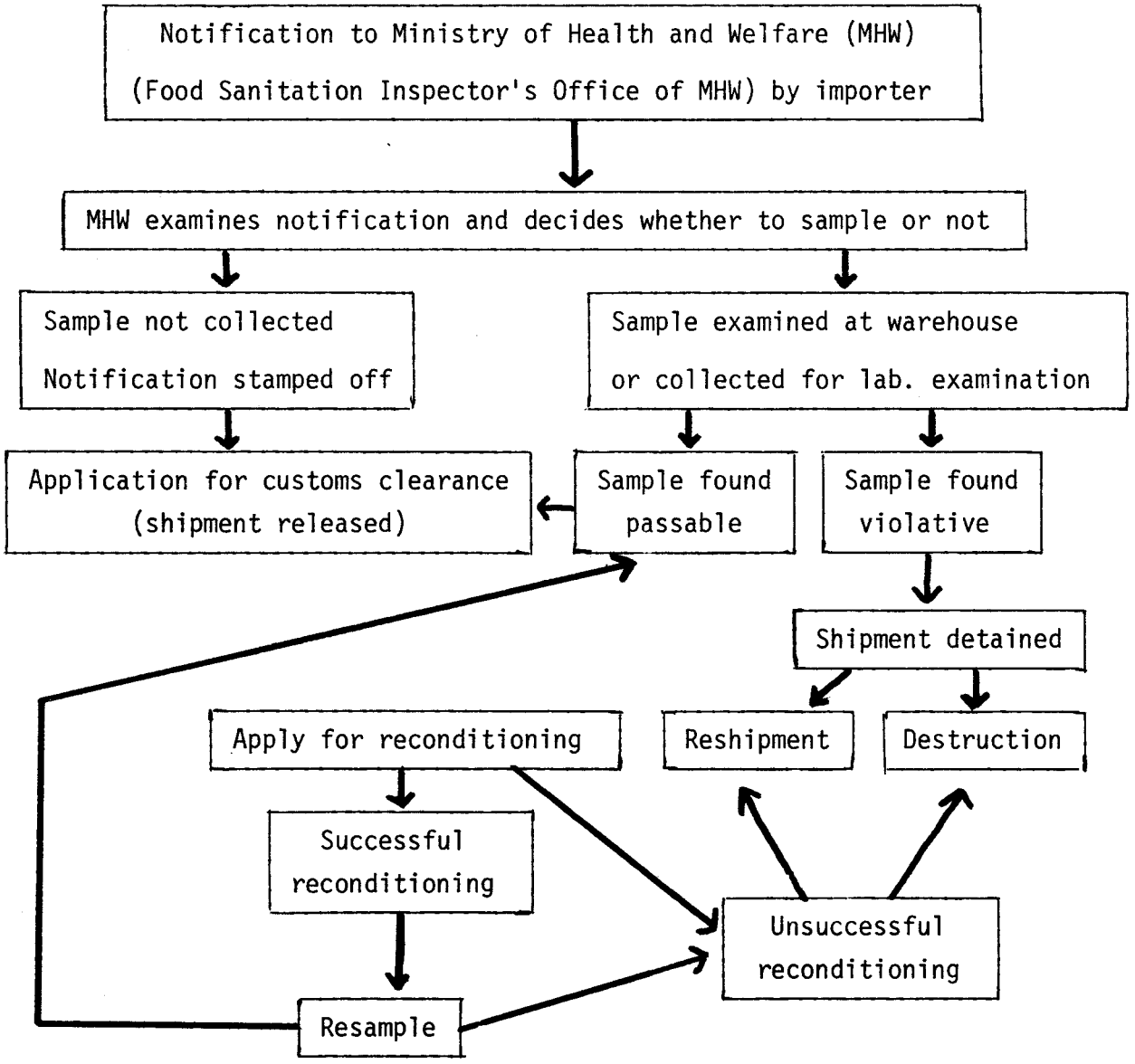

TABLE 3

FOOD SANITATION INSPECTION ON IMPORTED FOODS, 1968-78

Fiscal year	Cases of import	Ratio to previous year	Amount of imported foods (metric ton)	Cases of examination	Cases of violation	Examination vs import (%)	Violation vs examination (%)
1968	134,280	105.6	13,051,550	7,435	928	5.5	12.5
1969	153,100	114.0	14,262,564	9,379	1,068	6.1	11.3
1970	175,380	114.6	16,072,095	11,507	1,841	6.6	16.0
1971	188,587	107.5	16,538,030	12,278	1,138	6.5	9.3
1972	211,191	112.0	19,227,141	15,556	1,529	7.4	9.8
1973	241,160	114.2	23,332,729	14,926	1,647	6.2	11.0
1974	202,007	83.8	20,530,793	19,332	1,339	9.6	6.9
1975	246,507	122.0	20,774,969	21,461	1,634	8.7	7.6
1976	284,846	115.6	21,552,436	20,616	1,182	7.2	5.7
1977	311,957	109.5	23,300,079	22,079	1,205	7.1	5.5
1978	335,085	107.4	21,991,731	18,498	1,163	5.5	6.3

TABLE 4

FOOD SANITATION LAW

Article 4 Foods or food additives prohibited to sell.

The following food or additives shall neither be sold (including all cases other than sale to be delivered to an unspecific or many persons; hereinafter the same), nor be collected, manufactured, imported, processed, used, prepared, stored or displayed for sale:

1. That which is rotten, decomposed or immature; however, this shall not apply to such articles generally deemed neither injurious to human health nor unfit for food;

2. That which has contained or has been contaminated with a poisonous or detrimental substance, or that which is suspicious of such content and contamination; however, this shall not apply in cases where the Minister of Health and Welfare has determined to be not injurious to human health;

3. That which is or is suspected to be contaminated with pathogenic microorganisms, and may injure human health;

4. That which may injure human health due to causes, such as uncleanliness, mixing or adding foreign substances, and others.

Article 5 Prohibition of sale, etc. of meats, etc. of animals suffering diseases

1. Meat, bone, milk, viscera and blood of animals (including cattle, horses, pigs, sheep, goats, and other animals as prescribed by the Order; hereinafter the same) suffering from or being suspected to be suffering from diseases as prescribed by the Ministerial Ordinance, or dead shall not be sold as food, or collected, processed, used, prepared, stored or displayed for sale as food. However, this shall not apply to such meat, bone, and viscera of dead animals as recognized by the official to be neither injurious to human health nor unfit for food.

2. Animals' meat, viscera and products shall not be imported for sale as food unless they are attached a certificate, or the copy thereof, issued by a government of the exporting country, carrying a description to the effect that the meat or viscera is neither of animals suffering from, or suspected to be suffering from the diseases as prescribed by the Ministerial Ordinance under the preceding paragraph, nor of dead animals, as well as description on the date of butchery and others as prescribed by the Ministerial Ordinance.

TABLE 4 (cont'd)

FOOD SANITATION LAW

Article 6 Restriction on sale, etc. of synthetic chemical compounds, etc.

Except that the Minister of Health and Welfare has determined to be not harmful to human health after obtaining comments from the Food Sanitation Investigation Council, synthetic chemical compounds intended for use as food additives as well as products and foods containing such synthetic chemical compounds shall not be sold, nor be manufactured, imported, processed, used, stored or displayed for sale.

Article 7 Establishment of standards and criteria of food or additives.

1. The Minister of Health and Welfare shall, from the viewpoint of public sanitation, be authorized to set the standards concerning the methods of manufacturing, processing, using, preparing and preserving food or additives for sale or to set the criteria concerning the components of food or additives for sale.

2. When the standards or the criteria have been established in accordance with the provision of the preceding paragraph, it shall be forbidden to manufacture, process, use, prepare or preserve food or additives by methods contrary to such standards, or to manufacture, import, process, use, prepare, preserve or sell food or additives contrary to such criteria.

Article 9 Prohibition for sale, etc. of poisonous or stained apparatus or container-package.

Apparatus or container-package apt to injure human health due to containing or being stained with poisonous or detrimental materials, or apparatus or container-package apt to injure human health due to being in contact with food or additives and thus causing harmful influence thereto, shall neither be sold, nor be manufactured or imported for sale, nor be used for business.

Article 10 Establishment of standards and criteria of apparatus or container-package.

1. The Minister of Health and Welfare shall, from the viewpoint of public sanitation, be authorized to set the criteria concerning apparatus or container-package intended for sale or used for business, or materials thereof, or to set the standards concerning the method of manufacture thereof.

FOOD SANITATION LAW

2. When the criteria or standards have been established in accordance with the provision of the preceding paragraph, it shall be forbidden to sell, or manufacture or import for sale, or to use for business any apparatus or container-package contrary to the criteria, or to use materials contrary to the criteria, or to manufacture apparatus or container-package by methods contrary to the standards.

Article 16 Notification on import of food, additives, apparatus or container-package.

A person who intends to import food, additives, apparatus or container-package for sale or to be used for business shall, as prescribed by the Ministry of Health and Welfare Ordinance, notify to the Minister of Health and Welfare case by case.

TABLE 5

BACTERIOLOGICAL STANDARDS FOR FROZEN FOODS*

*The term "Frozen Foods" applies only to frozen manufactured or processed foods or frozen steaked fish or shucked shellfish (excluding raw oyster), which are being kept in container-packages.

1. Frozen foods for raw serving:

   a. Standard plate counts
      Less than hundred thousand per 1 gram of sample (1.0×10^5/g)

   b. Coliform organisms
      Negative per 0.01 gram of sample

   c. Salmonella
      Negative per 1 gram of sample

   d. Staphylococcus aureus
      Negative per 0.01 gram of sample

2. Frozen foods to be cooked before serving (cooked before freezing):

   a. Standard plate counts
      Less than hundred thousand per 1 gram of sample (1.0×10^5/g)

   b. Coliform organisms
      Negative per 0.01 gram of sample

   c. Salmonella
      Negative per 1 gram of sample

   d. Staphylococcus aureus
      Negative per 0.01 gram of sample

3. Frozen foods to be cooked before serving (not cooked before freezing):

   a. Standard plate counts
      Less than 3 million per 1 gram of sample (3.0×10^6/g)

   b. Escherichia coli
      Negative per 0.01 gram of sample

   c. Salmonella
      Negative per 1 gram of sample

   d. Staphylococcus aureus
      Negative per 0.01 gram of sample

   e. Volatile basic nitrogen
      20 mg per 100 grams of sample

TABLE 5 (cont'd)

BACTERIOLOGICAL STANDARDS FOR FROZEN FOODS*

4. Frozen fish and shellfish for raw serving:

   a. Standard plate counts
      Less than hundred thousand per 1 gram of sample (1.0×10^5/g)

   b. Coliform organisms
      Negative per 0.01 gram of sample

   c. Vibrio Parahaemolyticus
      Negative per 0.01 gram of sample

   d. Volatile basic nitrogen
      20 mg per 100 grams of sample

5. Frozen, cooked octopus:

   a. Standard plate counts
      Less than hundred thousand per 1 gram of sample (1.0×10^5/g)

   b. Coliform organisms
      Negative per 0.01 gram of sample

6. Frozen oyster for raw serving;

   a. Standard plate counts
      Less than fifty thousand per 1 gram of sample (5.0×10^4/g)

   b. Escherichia coli
      Less than 230 M.P.N. per 100 grams

7. Frozen Fish and shellfish for processing:

   a. Standard plate counts
      Less than five million per 1 gram of sample (5.0×10^6/g)

   b. Coliform organisms
      Negative per 0.01 gram of sample

   c. Vibrio Parahaemolyticus
      Negative per 0.01 gram of sample

TABLE 6

TEMPORARY TOLERANCES FOR POLYCHLORINATED BIPHENYLS (PCB's)

	Parts Per Million (PPM)
Fish & Shellfish, distant waters (edible portion)	0.5
Fish & Shellfish, inland waters (edible portion)	3.0
Milk	0.1
Manufactured dairy products	1.0
Powdered milk for infant consumption	0.2
Meats	0.5
Eggs	0.2
Food-packaging Material	5.0

TABLE 7

TEMPORARY TOLERANCES FOR MERCURY IN FISH*

Total Mercury	0.4 ppm
Methyl Mercury	0.3 ppm

* excluding tuna, billfish, rockfish, alfonsin, black cod, red tanner crab, shark.

TABLE 8

VIOLATIONS OF FOOD SANITATION LAW, 1978

Articles related to violations	Cases of violation	%	Details
Article 4	254	27	Wheat, beans or other fresh foods rotten or decomposed by accidents. Groundnuts contaminated with Aflatoxin B. Processed food contained with foreign substances.
Article 5	19	2	Lack or defect of Health Certificates for meat and meat products.
Article 6	206	22	Addition of non-approved food additives to foods.
Article 7	355	38	Food processed under illegal conditions and methods, or foods containing illegal additives.
Article 9	0	0	
Article 10	109	11	Apparatus not fit to criteria or standard.

TABLE 9

FOOD ADDITIVES BANNED IN FISH AND SHELLFISH PRODUCTS

This list indicates food additives which are possibly used in European countries and the United States but banned in fish and shellfish products in Japan.

Acrylamide
Adipic Acid
Aluminum Sodium Sulfate
Aluminum Stearate
Aluminum Sulfate
Ammonium Alginate
Ammonium Saccharin
Ammonium Stearate
Arginine Monohydrochloride
Ascorbyl Diacetate
Ascorbyl Palmitate
Boric Acid
Brominated Vegetable Oil
Butyl p-Chlorobenzoate
Butyl p-Hydroxybenzoate
Butylated Hydroxymethylphenol
Calcium Acetate
Calcium Alginate
Calcium Ascorbate
Calcium Benzoate
Calcium Bromate
Calcium Disodium EDTA (Calcium Disodium Ethylenediamine-tetraacetate)
Calcium Formate
Calcium Malate
Calcium Propionate
Calcium Pyrophosphate
Calcium Saccharin
Calcium Silicate
Calcium Silicoaluminate
Calcium Sodium Silicoaluminate
Calcium Sorbate
Calcium Stearate
Calcium Stearoyl-lactylate
Calcium Tartrate
Choline Bitartrate
Choline Chloride
Choline Phosphate
p-Chlorobenzoic Acid Ester
Copper Gluconate
Cysteine Monohydrochloride
Dehydroacetic Acid
Dexpanthenol
Diacetyl Tartaric Acid Esters of Mono and Diglycerides
Dichloro-difluoro-methane
Dilauryl Thiodipropionate
Dioctyl Sodium Sulfosuccinate
Disodium EDTA (Disodium Ethylene diamine tetraacetate)
Dodecyl Gallate
EDTA Disodium Salt
Ethoxylated Mono and Diglycerides
Ethoxyquin
Ethyl p-Chlorobenzoate
Ethyl p-Hydroxybenzoate (Ethylparaben)
Ethyl-cellulose
Ethylene Dichloride
Ferric Phosphate
Ferrous Gluconate
Formic Acid
Galactosyl Glyceride
Glutamic Acid Hydrochloride
Glycerin Acetic Acid Ester
Glycerol Ester of Acetic Acid
Glycerol Ester of Partially Dimerized Rosin
Glycerol Ester of Partially Hydrogenated Wood Rosin
Glycerol Ester of Polymerized Rosin
Glycerol Ester of Tall Oil Rosin
Glycerol Ester of Wood Rosin
Gum Guaiac
Heptyl p-Hydroxybenzoate (Heptylparaben)
Hexamethylenetetramine
p-Hydroxybenzoic Acid Ester
p-Hydroxybenzylacetone
Hydroxylated Lecithin
Hydroxypropyl-cellulose
Hydroxypropyl-methyl-cellulose
Iron Oxides
Lactated Mono-Diglycerides
Lactylated Fatty Acid Ester of Glycerol and Propylene Glycol
Lactylic Esters of Fatty Acids
Leucine Monohydrochloride
Magnesium Hydroxide
Magnesium Oxide
Magnesium Phosphate, Dibasic
Magnesium Phosphate, Tribasic

TABLE 9 (cont'd)

FOOD ADDITIVES BANNED IN FISH AND SHELLFISH PRODUCTS

Magnesium Silicate
Magnesium Stearate
Manganese
Mannitol
Methyl Alcohol
Methyl p-Chlorobenzoate
Methyl p-Hydroxybenzoate (Methylparaben)
Methyl-ethyl-cellulose
Methylene Chloride
Mineral Oil, White
Monoammonium Glutamate
Niacinamide Ascorbate
Octyl Gallate
Oxystearin
Panthenol
Polyethylene Glycols (PEG)
Polyglycerol Esters of Fatty Acids
Polyoxyethylene Sorbitan Fatty Acid Ester
Polysorbate
Polyvinylpyrrolidone (PVP)
Potassium Acetate
Potassium Alginate
Potassium Benzoate
Potassium Bicarbonate
Potassium Chloride
Potassium Citrate
Potassium Formate
Potassium Glutamate
Potassium Glycerophosphate
Potassium Guanylate
Potassium Hydroxide
Potassium Inosinate
Potassium Lactate
Potassium Malate
Potassium Nitrate
Potassium Nitrite
Potassium Propionate
Potassium Saccharin
Potassium Stearate
Potassium Sulfate
Potassium Sulfite
Potassium Tartrate
Propionic Acid
Propyl p-Chlorobenzoate
Propyl Gallate
Propyl p-Hydroxybenzoate (Propylparaben)
Propylene Glycol Monostearate
Saccharin
Silica Gel
Soda Alum
Sodium Acetoacetate
Sodium Aluminum Phosphate
Sodium Bisulfate
Sodium Borate
Sodium Dehydroacetate
Sodium Diacetate
Sodium Ferric Pyrophosphate
Sodium Ferrocyanide
Sodium Formate
Sodium Gluconate
Sodium Lauryl Sulfate
Sodium Nitrate
Sodium Potassium Tartrate
Sodium Propionate
Sodium Silicoaluminate
Sodium Sorbate
Sodium Stearate
Sodium Stearoyl-lactylate
Sodium Stearyl Fumarate
Sodium Thiosulfate
Stannous Chloride
Stearyl Monoglyceridyl Citrate
Succinylated Monoglycerides
Tetracycline
Thidipropionic Acid
Tocopherol Acetate
Tocopherol Ester
Tocopheryl Acetate
Tocopheryl Acid Succinate
Triacetin
Trichloroethylene
Triethyl Citrate
Zinc Sulfate

TABLE 10

COLORING AGENTS BANNED IN FISH AND SHELLFISH PRODUCTS

This list indicates important coloring agents which are banned in fish and shellfish products in Japan.

Acid Violet 6B
Acid Yellow
Acilan Brilliant Blue FFR
Acilan Fast Green 10G
Allura Red
B-Apo-8'-carotenal
B-Apo-8'-carotenoic Acid Ethyl Ester
Auramine
Azorubine
Benzyl Violet 4B
Black 7984
Black PN
Blue VRS
Brilliant Black PN
Brilliant Crocein
Brilliant Green
Brilliant Indocyanin 6B
Brown FK
Butter Yellow
Carmoisine
Chlorophyll Copper Complex
Chlorophyllin Copper Complex
  Sodium (or Potassium) Salt
Chocolate Brown FB
Chocolate Brown HT
Chrysoidine
Chrysoine
Citrus Red 2
Cobalt Blue
Eosine
Fast Red E
Fast Yellow AB
FD & C Red No. 4
FD & C Red No. 40
FD & C Violet No. 1
Food Red 17
Fuchsin
Fuchsin Acid
Green S
Guinea Green B
Indathrene Blue RS
Indigo
Iron Oxides
Light Green SF Yellowish
Litholrubin BK
Magenta
Methyl Violet B
Naphthol Green B
Naphthol Yellow S
Oil Orange SS
Oil Orange XO
Oil Red XO
Oil Yellow 3G
Oil Yellow AB
Oil Yellow OB
Orange B
Orange G
Orange GGN
Orange I
Orange RN
Orcein
Patent Blue V
Phthalocyanine Blue
Phthalocyanine Green
Ponceau 3R
Ponceau 4R See "New Coccine"
Ponceau 6R
Ponceau SX
Quinoline Yellow
Red 6B
Red FB
Red 2G
Scarlet GN
Sudan I
Sudan Blue II
Sudan Red
Titanium Dioxide
Ultramarine
Victoria Blue B
Victoria Blue R
Violamine R
Violet BNP
Wool Green BS
Yellow 2G

TABLE 11

FOOD ADDITIVES WITH STATED TOLERANCES AND/OR RESTRICTIONS

Product	Tolerance	Specific Use or Restrictions
Butyl-hydroxy-anisol (BHA)	0.2g/kg	Dried fish and shellfish
	0.2g/kg	Salted fish and shellfish
	1 g/kg dipping solution	Frozen fish and shellfish
Calcium Carbonate	1% as Ca	
Calcium Chloride	1% as Ca	
Calcium Citrate	1% as Ca	
Calcium Dihydrogen Phosphate	1% as Ca	
Calcium Glycerophosphate	1% as Ca	
Calcium Gluconate	1% as Ca	
Calcium Hydroxide	1% as Ca	
Calcium Lactate	1% as Ca	
Calcium Pantothenate	1% as Ca	
Calcium Phosphate, Monobasic	1% as Ca	
Calcium Phosphate, Dibasic	1% as Ca	
Calcium Phosphate, Tribasic	1% as Ca	
Calcium Sulfate	1% as Ca	
Calcium Caroxymethylcellulose	2%	
* Hydrogen Peroxide	0.1g/kg	Fish cake (kamaboko, chikuwa)
	0.03g/kg	Other foods
Methylcellulose	2%	
Potassium Bromate	0.27g/kg	Fish paste
Potassium Metabisulfite	0.1g as SO_2/kg of shelled shrimp	Shrimp
	0.03g as SO_2/kg	Other foods
Potassium Sorbate	0.5g/kg	"Suzuke" (pickled in vinegar)
	1 g/kg	Dried fish and shellfish
	1 g/kg	""Tsukudani" (preserved fish boiled down in soy sauce)
	1 g/kg	"Kasuzuke" (pickled in "sake" lees)
	1 g/kg	"Kojizuke" (preserved in "koji" rice)
	1 g/kg	"Shoyuzuke" (pickled in soy sauce)
	1 g/kg	"Misozuke" (pickled in soy bean paste)
	1.5g/kg	Smoked cuttlefish and octopus
	2 g/kg	Fish paste and sea urchin products
Propylene Glycol Alginate	1%	
Silicon Resin	0.05g/kg	Only as antifoaming agent
Sodium Benzoate	2.5g/kg	Caviar
Sodium Bisulfite	Same as potassium Metabisulfite	

TABLE 11 (cont'd)

FOOD ADDITIVES WITH STATED TOLERANCES AND/OR RESTRICTIONS

Product	Tolerance	Specific Use or Restrictions
Sodium Carboxymethylcellulose	2%	
Sodium Carboxymethylstarch	2%	
Sodium Chondroitin Sulfate	3 g/kg	Fish sausage
Sodium Hyposulfite	Same as Potassium Metabisulfite	
Sodium Nitrite	0.05g as NO_2/kg	Fish sausage and fish ham
	0.005g as NO_2/kg	Salmon roe
Sodium Polyacrylate	0.2%	
Sodium Starch Phosphate	2%	
Sodium Sulfite	Same as Potassium Metabisulfite	
Sorbic Acid	Same as Potassium Sorbate	
Succharin Sodium	0.2g/kg	Canned or bottled food
	0.3g/kg	Fish paste
	0.5g/kg	"Tsukudani"
	1.2g/kg	"Kasuzuke"
	1.2g/kg	"Misozuke"
	1.2g/kg	"Shoyuzuke"
	2 g/kg	"Kojizuke"
	2 g/kg	"Suzuke" (pickled in vinegar)
	1.2g/kg	Other processed fish and shellfish
Sulfur Dioxide	Same as Potassium Metabisulfite	

* According to a decree by the Ministry of Health and Welfare on February 20, 1980, hydrogen peroxide can not be used as a food additive after October 1, 1980.

TABLE 12

PERMITTED FOOD ADDITIVES

This list indicates food additives which are allowed in fish and shellfish in Japan.

Acetic Acid
DL-Alanine
Alum
Ammonia
Ammonium Alum
Ammonium Bicarbonate
Ammonium Carbonate
Ammonium Chloride
Ammonium Phosphate, Monobasic
Ammonium Phosphate, Bibasic
Ammonium Sulfate
Annatto (water soluble)
L-Arginine L-Glutamate
L-Ascorbic Acid (Vitamin C)
L-Ascorbyl Stearates
Calciferol (Vitamin D_2)
Calcium 5'-Ribonucleotide
Carbon Dioxide
B-Carotene
Casein
Cholecalciferol (Vitamin D_3)
Citric Acid
Dibenzoylthiamine
Dibenzoylthiamine Hydrochloride
Disodium Succinate
Erythorbic Acid
Ferric Ammonium Citrate
Ferric Chloride
Ferric Citrate
Ferric Pyrophosphate
Ferrous Lactate
Ferrous Pyrophosphate
Ferrous Sulfate
Folic Acid
Fumaric Acid
Gluconic Acid
Glucono-delta-lactone
L-Glutamic Acid
Glycerine
Glycerine Fatty Acid Ester
Glycine
L-Histidine Monohydrochloride
Hypochloric Acid
Iron and Sodium Succinate Citrate
L-Isoleucine
Lactic Acid
L-Lysine L-Aspartate
L-Lysine L-Glutamate
L-Lysine Monohydrochloride
Magnesium Carbonate
Magnesium Chloride
Magnesium Sulfate
dl-Malic Acid
Methionine
Methyl-hesperidin
Monosodium L-Asparate
Monosodium Fumarate
Monosodium Succinate
Nicotinamide
Nicotinic Acid (Niacine)
L-Phenylalanine
Phosphoric Acid
Potassium Bitartrate
Potassium Carbonate
Potassium Metaphosphate
Potassium Norbixate
Potassium Phosphate, Monobasic
Potassium Phosphate, Dibasic
Potassium Polyphosphate
Potassium Pyrophosphate
Propylene Glycol
Propylene Glycol Fatty Acid Ester
Pyridoxine Hydrochloride (Vitamin B_6)
Riboflavin (Vitamin B_2)
Riboflavin Phosphate Sodium
Riboflavin Tetrabutylate
Sodium Acetate
Sodium Acid Pyrophosphate
Sodium Alginate
Sodium L-Ascorbate
Sodium Carbonate
Sodium Caseinate
Sodium Citrate
Sodium 5'-Cytidilate
Sodium Erythorbate
Sodium L-Glutamate
Sodium 5'-Guanylate
Sodium Hydrogen Carbonate
(Sodium Bicarbonate)
Sodium Hypochloride
Sodium 5'-Inosinate
Sodium Iron Chlorophyllin
Sodium Lactate
Sodium dl-Malate
Sodium Metaphosphate
Sodium Norbixate

TABLE 12 (cont'd)

PERMITTED FOOD ADDITIVES

Sodium Pantothenate
Sodium Phosphate, Monobasic
Sodium Phosphate, Dibasic
Sodium Polyphosphate
Sodium Pyrophosphate
Sodium 5'-Ribonucleotide
Sodium Sulfate
Sodium Tartrate
Sodium 5'-Uridilate
Sorbitan Fatty Acid Ester
D-Sorbital
Soybean Phospholipids
(Soybean Lecithin)
Succinic Acid
Sucrose Fatty Acid Ester
Tartaric Acid
L-Theanine
Thiamine Hydrochloride
Thiamine Mononitrate
Tripotassium Phosphate
Trisodium Phosphate
dl-X-Tocopherol (Vitamin E)
Threonine
Tryptophan
L-Valine
Vitamin A_1
Vitamin A_1 Fatty Acid Ester
D-Xylose

TABLE 13

COLORING AGENTS PERMITTED IN FISH AND SHELLFISH PRODUCTS IN JAPAN

This list indicates important coloring agents which can be used in fish and shellfish products in Japan.

Acid Red*
Alkanet (Natural)
Alkannin (Natural)
Amaranth*
Annatto (Natural)
Anthocyan (Natural)
Anthocyanin (Natural)
Beet Red (Natural)
Betanin (Natural)
Bixine (Natural)
Brilliant Blue FCF*
Canthaxanthine (Natural)
Capsanthin (Natural)
Capsorubin (Natural)
Caramel (Natural)
Carbon Black (Natural)
Carminic Acid (Natural)
Carotene (Alpha Beta Gamma) (Natural)
Carthamus (Natural)
Charcoal (Natural)
Chlorophyll (Natural)
Cochineal (Natural)
Crocetin (Natural)
Crocin (Natural)
Cryptoxanthin (Natural)
Curcumine (Natural)
Enocyanine (Natural)
Erythrosine*
Fast Green FCF*
Flavoxanthin (Natural)
Indigo Carmine (Indigotine)*
Lactoflavin
New Coccine*
Norbixine (Natural)
Persian Berry (Natural)
Phloxine*
Redwood (Natural)
Riboflavin (Vitamin B_2)
Rose Bengale*
Saffron (Natural)
Sodium Iron Chlorophyllin
Sunset Yellow FCF
Tartrazine
Turmeric (Natural)
Xanthophylls (Natural)
Yellow Wood (Natural)

Note: *Not permitted in soaked fish, fresh fish and shellfish. Can be used in other fish and shellfish products.

(Natural) means that the food additive can be used because it is a natural substance.

TABLE 14

STANDARD FOR LABELING

Article 5 The standard for labeling of foods or additives specified in Table 14 shall be fixed as follows:

1. The following items shall be stated so as to be easily seen on a container-package (in case that container-package is further packaged for retail sale this outer retail package is deemed as container-package; same reference is applied mutatis mutandis in paragraph 4 of this Article) without opening the container-package.

   a. Name (in case of a chemically synthesized substance used as additive (except that described in Table 17), the name shall be represented by the name specified in Table 15.

   b. Date of manufacture or processing (in case of imported goods and when the date of manufacture or processing is not known, the date of manufacture or processing may be substituted by the date of import accompanied by the statement that it is a date of import; hereinafter same reference is applied mutatis mutandis).

   c. Location of manufacturing or processing plant (in case of imported goods, location of place of business of importer; hereinafter same reference is applied mutatis mutandis) and name (in case of juridicial person, the name of juridicial person) of manufacturer or processor (in case of imported goods, name of importer).

   d. In case of a preparation which contains chemically synthesized substances (except that used for the purpose of flavoring the components and weight percentage of components (in case a component is a derivative of Vitamin A, this shall be represented by the weight percentage as Vitamin A).

   e. In case of a food which contains an additive(s) specified in Table 18, the statement that the food contains such additive(s) . However, instead of declaring individual additive(s), class name specified in same appendix may be declared.

   f. In case of food or additive of which standard of method of using or preserving is fixed in accordance with Article 7, Paragraph 1 of the Law, the method of using or preserving.

   g. In case of additives specified in Item 11 of Table 16 the words "Food Additive"

   h. In case of a synthetic chemical derivative of Vitamin A, the weight percentage as Vitamin A.

i. In case of a canned food, main ingredients used in it.

j. In case of meat products, whale meat products, fish sausage, fish ham or fish paste which are packed in hermetically sealed container (except canned or bottled such foods) and sterilized at 120°C for four minutes or by method which is effective equally as treatment described above, the method of sterilization.

k. In case of fish sausage, fish ham or special packed fish paste of which pH (a part of product is taken and cut in small pieces and 10 times volume purified water is added and pH is measured)is less than 5.5 or water activity is less than 0.94, declaration of value of pH or water activity.

l. In case of foods which were manufactured or processed and frozen (except meat products, whale meat products, fish paste and boiled octopus), declaration if cooking is necessary or not before eating.

m. In case of frozen foods which need to be cooked before eating (foods which were manufactured or processed and frozen and need to be cooked before eating), the declaration that the foods were cooked immediately before frozen or not.

n. In case of frozen steaked fish or shucked shellfish (excluding raw oyster) and raw oyster, the purpose of use whether it is for consumption in raw (without cooking) condition or not.

o. In case of ionized irradiated foods, to the effect that the foods were irradiated by radioactivity.

p. In case of foods specified in Item 9 of Table 16, to the effect that foods are thermally sterilized under pressure after they are packed in airtight container and sealed hermetically.

2. The declaration of items shall be made correctly in vernacular by the terms legible and understandable for general purchasers or consumers.

Notwithstanding the provisions of Item 1 of preceding paragraph, the declaration of the date of manufacture may be substituted by the below stated marks constituted by combination of Arabic figures and Roman alphabet for the labeling of foods specified in Item 1 of Table 16, and canned, bottled, casked or jarred foods among the foods specified in Item 4, Item 5, or Item 9 and 10 of Table 16, and the declaration of date of manufacture may be omitted in case of foods specified in Item 2 of Table 16.

glass-bottled (except paper-capped) or polyethylene container-package foods among foods specified in Item 3 of Table 16, foods specified item 10-b. of Table 16 (except canned, bottled, casked or jarred foods) or additives specified in Item 11 of Table 16.

a. First mark shall be expressed by the last number of the year of Christian Era.

b. Second mark shall be expressed by Arabic figures of month of manufacture (however, October shall be expressed by O, November shall be expressed by Y and December shall be expressed by Z).

c. Third and fourth characters shall be expressed by Arabic figure of the date of manufacture (in case the date is composed of one character, third character shall be stated as O).

Notwithstanding the provisions of Item 1 of Paragraph 1, the declaration of location of manufacturing plant and the name of manufacturer may be substituted by the declaration of (a) combination of address and name (in case of a juridical person, the name of juridical person) of manufacture and the specific marks (limited only to the Arabic figure, Roman alphabet, Hiragana and Katakana and the combination of these; hereinafter, the term "Mark" is referred as such in this paragraph) of manufacturing plant which has been reported by the manufacturer to the Minister of Health and Welfare through the Governor of Prefecture where the manufacturing plant is located or (b) combination of address and name (in case of a juridical person, the name of juridical person) of distributor followed by the description to that effect and the specific mark of manufacturing plant which has been jointly reported by the manufacturer and distributor to the Minister of Health and Welfare through the Governor of Prefecture where the manufacturing plant is located.

Notwithstanding the requirement of Item 1 of Paragraph 1, labeling may be omitted in case of foods (among foods specified in Item 10-b of Table 16) designated by the Minister of Health and Welfare as their container-packages are too small to clearly carry the items specified in Paragraph 1.

TABLE 15

OFFICIAL NAMES OF FOOD ADDITIVES TO BE USED FOR LABELING

Sodium Chlorite
Sodium Nitrite
L-Ascorbic acid (Vitamin C)
L-Ascorbyl stearate (Vitamin C stearate)
Sodium L-ascorbate
Monosodium L-aspartate
Methyl acetyl ricinolate
Ethyl acetoacetate
Acetophenone
Acetone
Anisaldehyde
a-Amyl cinnamic aldehyde
DL-Alanine
L-Arginine L-glutamate
Sodium bisulfite
Sodium sulfite
Sodium sulfite, anhydrous
Sodium alginate
Propylene glycol alginate
Methyl anthranilate
Benzoic acid
Sodium benzoate
Ammonia
Ammonia alum
Ion exchange resin
Isoeugenol
Isoamyl isovalerate
Ethyl isovalerate
Isothiocyanates (except those which are generally deemed highly toxic)
Allyl isothiocyanate
L-Isoleucine
Indol and its derivatives
Sodium 5-inosinate
Sodium 5'-uridylate
Undecalactone
Ester gum
Esters
Ethyl vanillin
Ethers
Ethyl oenanthate
Erythorbic acid
Sodium erythorbate
Ammonium chloride
Calcium chloride
Ferric chloride
Magnesium chloride
Iron and sodium succinato citrate
Monsodium succinate
Hydrochloric Acid
Eugenol
Oxyethylene higher aliphatic alcohol
Octyl aldehyde
ortho-Phenylphenol and Sodium ortho-phenylphenate
Sodium oleate
Hydrogen peroxide
Benzoil peroxide
Sodium caseinate
Ethyl caprylate
Ethyl caprate
Caproic acid
Allyl caproate
Ethyl caproate
Ammonium persulfate
Calciferol (Vitamin D_2)
B-Carotene
Isoamyl formate
Geranyl formate
Citronellyl formate
Sodium 5'-guanylate
Citric acid
Citric acid, anhydrous
Calcium citrate
Ferric citrate
Ferric ammonium citrate
Sodium citrate
Glycine
Glycerine
Glycerin fatty acid ester
Calcium glycerophosphate
Disodium glycyrrhizinate
Trisodium glycyrrhizinate
Glucono-o-lactone
Gluconic acid
Calcium gluconate
L-Glutamic acid
Monosodium L-glutamate
Cinnamyl alcohol
Cinnamic aldehyde
Cinnamic acid
Ethyl cinnamate
Methyl cinnamate
Ketones
Geraniol
Calcium hypochlorite
Succinic acid
Potassium d-bitartrate
Potassium dl-bitartrate
Sodium d-tartrate

TABLE 15 (cont'd)

OFFICIAL NAMES OF FOOD ADDITIVES TO BE USED FOR LABELING

Magnesium carbonate
Thiamine hydrochloride
Thiamine mononitrate
Thiamine dicetylsulfate
Thiamine thiocyanate
Thiamine naphthalene-1, 5-disulfonate
Thiamine naphthalene-2, 6-disulfonate
Thiamine phenolphthalinate
Thiamine dilaurylsulfate
Thioalcohols (except those which are generally deemed highly toxic)
Thioethers (except those which are generally deemed highly toxic)
Sodium thiosulfate
L-Theanine
Decyl alcohol
Decyl aldehyde
Sodium iron chlorophyllin
Dehydroacetic acid
Sodium dehydroacetate
Terpineol
Terpenes
Sodium carboxymethylstarch
Sodium starch phosphate
Sodium copper chlorophyllin
Copper chlorophyll
dl-a-Tocopherol
DL-Tryptophan
L-Tryptophan
Nicotinic acid
Nicotinamide
Chlorine dioxide
Carbon dioxide
Lactic acid
Calcium lactate
Ferrous lactate
Sodium lactate
Nonalactone
Potassium norbixin
Sodium norbixin
Vanillin
Isobutyl p-hydroxybenzoate
Isopropyl p-hydroxybenzoate
Ethyl p-hydroxybenzoate
Butyl p-hydroxybenzoate
Propyl p-hydroxybenzoate
Polyisobutylene
Ferrous pyrophosphate
Ferric pyrophosphate
Sodium pyrophosphate
Sodium pyrophosphate, anhydrous
L-Phenylalanine
Isoamyl phenylacetate
Isobutyl phenylacetate
Ethyl phenylacetate
Phenolethers (except those which are generally deemed highly toxic)
Phenols (except those which are generally deemed highly toxic)
Butyl hydroxy anisol
Fumaric acid
Monosodium fumarate
Furfral and its derivatives (except those which are generally deemed highly toxic)
Isoamyl propionate
Ethyl propionate
Calcium propionate
Sodium propionate
Benzyl propionate
Propylene glycol
Propylene glycol fatty acid ester
l-Perillaldehyde
Benzyl alcohol
Benzaldehyde
Benzoyl thiamine disulfide
Aromatic alcohols
Aromatic aldehydes (except those which are generally deemed highly toxic)
Propyl gallate
Sodium polyacrylate
L-Lysine L-Aspartate
L-Lysine monohydrochloride
L-Lysine L-Glutamate
Linalool
Calcium 5'-ribonucleotide
Sodium 5'-ribonucleotide
Riboflavin (Vitamin B_2)
Riboflavin tetrabutyrate
Riboflavin phosphate sodium
Sulfuric acid
Ammonium sulfate
Calcium sulfate
Ferrous sulfate, exsiccated
Ferrous sulfate
Sodium sulfate
Magnesium sulfate
dl-Malic acid

TABLE 15 (cont'd)

OFFICIAL NAMES OF FOOD ADDITIVES TO BE USED FOR LABELING

Disodium succinate
Choline phosphate
Cholecalciferol (Vitamin D_3)
Sodium chondroitin sulfate
Isoamyl acetate
Ethyl acetate
Geranyl acetate
Cyclohexyl acetate
Citronellyl acetate
Cinnamyl acetate
Terpinyl acetate
Sodium acetate
Sodium acetate, anhydrous
Polyvinyl acetate
Phenylethyl acetate
Butyl acetate
Benzyl acetate
l-Menthyl acetate
Linalyl acetate
Saccharin
Saccharin sodium
Bleaching powder
Methyl salicylate
Calcium dihydrogen pyrophosphate
Disodium dihydrogen pyrophosphate
Iron sesquioxide
Hypochlorous acid
Sodium hypochlorite
Sodium hyposulfite
Allyl cyclohexylpropionate
L-Cystein monohydrochloride
Sodium 5'-cytidilate
Citral
Citronellal
Citronello
Diphenyl
Fatty acids
Aliphatic higher alcohols
Aliphatic higher aldehydes (except those which are deemed highly toxic)
Aliphatic higher hydrocarbons (except those which are generally deemed highly toxic)
Oxalic acid
Potassium bromate
d-Tartaric acid
dl-Tartaric acid
Sodium bicarbonate
Sodium carbonate
Sodium carbonate, anhydrous
Sodium dl-tartrate
Potassium nitrate
Sodium nitrate
Food red No. 2 (Amaranth)
Food red No. 3 (Erythrosine)
Food red No. 102 (New Coccine)
Food red No. 104 (Phloxine)
Food red No. 105 (Rose bengale)
Food red No. 106 (Acid red)
Food yellow No. 4 (Tartrazine)
Food yellow No. 5 (Sunset yellow FCF)
Food green No. 3 (Fast green FCF)
Food blue No. 1 (Brilliant blue FCF)
Food blue No. 2 (Indigo carmine)
Dibutyl hydroxy toluene
Dibenzoyl thiamine
Dibenzoyl thiamine hydrochloride
Sucrose fatty acid ester
Silicone resin
Calcium hydroxide
Sodium hydroxide
Sodium hydroxide (cristal)
Calcium stearyl lactylate
DL-Threonine
L-Threonine
Calcium carboxymethylcellulose
Sodium carboxymethylcellulose
Sorbitan fatty acid ester
D-Sorbitol
Sorbic acid
Potassium sorbate
Calcium phosphate, monobasic
Calcium phosphate, dibasic
Calcium phosphate, tribasic
Ammonium carbonate
Potassium carbonate, anhydrous
Calcium carbonate
Ammonium bicarbonate
p-methyl acetophenone
L-Valine
Calcium pantothenate
Sodium pantothenate
L-Histidine monohydrochloride
Vitamin A_1 (Axerophthol)
Vitamin A_1 fatty acid ester
Hydroxycitronellal
Hydroxycitronellal dimethylacetal
Piperonal
Piperonyl butoxide
Glacial acetic acid
Pyridoxine hydrochloride (Vitamin B_6)
Potassium pyrophosphate

TABLE 15 (cont'd)

OFFICIAL NAMES OF FOOD ADDITIVES TO BE USED FOR LABELING

Polyoxyethylene higher aliphatic alcohol
Polybutene
Potassium polyphosphate
Sodium polyphosphate
d-Borneol
Maltol
D-Mannitol
Alum
Sulfur dioxide
Potassium metabisulfite
Potassium metaphosphate
Sodium metaphosphate
DL-Methionine
L-Methionine
Methyl N-methylanthranilate
Methyl cellulose
Methyl B-naphthyl ketone
Methyl hesperidin
dl-Menthol
l-Menthol
Morpholine fatty acid salt
Burnt ammonium alum
Burnt alum
Eucalyptol
Folic acid
Ionone
Lauryltrimethylammonium-2, 4, 5-trichlorophenoxide
Butyric acid
Isoamyl butyrate
Ethyl butyrate
Cyclohexyl butyrate
Butyl butyrate
Lactones (except those which are generally deemed highly toxic)
Sodium dl-Malate
Phosphoric acid
Ammonium phosphate, monobasic
Potassium phosphate, monobasic
Sodium phosphate, monobasic
Sodium phosphate, monobasic anhydrous
Ammonium phosphate, dibasic
Potassium phosphate, dibasic
Sodium phosphate, dibasic
Sodium phosphate, dibasic, anhydrous
Potassium phosphate, tribasic
Sodium phosphate, tribasic
Sodium phosphate, tribasic, anhydrous

TABLE 16

FOODS AND ADDITIVES DESIGNATED FOR LABELING REQUIREMENT

1. Margarine.
2. Alcoholic drinks (which contain not less than 1 volume percent of alcohol).
3. Soft drinks.
4. Hams, sausages and bacons.
5. Fish hams, fish sausages and whale bacons.
6. Beans which contain cyanic compounds.
7. Frozen foods (only the frozen manufactured or processed foods or frozen steaked fish or shucked shellfish (excluding raw oyster) which are being kept in container-packages).
8. Ionized irradiated foods.
9. Foods which are thermally sterilized under pressure after being packed in hermetically sealed container (foods which are thermally sterilized under pressure after being packed in an airtight container and sealed hermetically. However, soft drinks, meat products, whale-meat products and fishpaste products are excluded).
10. Foods specified in the following sub-items which are being kept in container-packages (excluding foods stipulated in preceding items).
    a. Meats, raw oysters, raw noodles (including cooked noodles), instant noodles, lunches, bread and prepared foods (such as sandwiches, hot-dogs and similars), daily dishes, fishpaste products and cakes.
    b. Processed foods other than those specified in preceding sub-item.
11. Additives (synthetic chemical compounds and preparations which contain such synthetic chemical compounds and additives whose standards or requirements have been established in accordance with Article 7, Paragraph 1 of the Law).

TABLE 17

SPECIALLY DESIGNATED NAMES FOR LABELING

Isothiocyanates
Indol and its derivatives
Ethers
Esters
Ketones
Aliphatic acids
Aliphatic higher alcohols
Aliphatic higher aldehydes
Aliphatic hydrocarbons
Thioalcohols
Thioethers
Terpenes
Phenolethers
Phenols
Furfural and its derivatives
Aromatic alcohols
Aromatic aldehydes
Lactones

TABLE 18

CLASS NAMES OF FOOD ADDITIVES TO BE USED FOR LABELING

Class Name	Food Additive
Artificial Sweetner or Synthetic Sweetner	Disodium glycyrrhizinate
	Trisodium glycyrrhizinate
	Saccharin
	Saccharin sodium
Synthetic Color	Food red No. 2
	Food red No. 3
	Food red No. 102
	Food red No. 104
	Food red No. 105
	Food red No. 106
	Food yellow No. 4
	Food yellow No. 5
	Food green No. 3
	Food blue No. 1
	Food blue No. 2
	Iron sesquioxide
	Sodium iron chlorophyllin
	Sodium copper chlorophyllin
	Potassium norbixin
	Sodium norbixin
Synthetic Preservative	Benzoic acid
	Sodium benzoate
	Sorbic acid
	Potassium sorbate
	Dehydroacetic acid
	Sodium dehydroacetate
	Isobutyl p-hydroxybenzoate
	Isopropyl p-hydroxybenzoate
	Ethyl p-hydroxybenzoate
	Butyl p-hydroxybenzoate
	Propyl p-hydroxybenzoate
	Calcium propionate
	Sodium propionate
Synthetic Thickner	Sodium alginate
	Propylene glycol alginate
	Sodium carboxymethylcellulose
	Calcium carboxymethylcellulose
	Sodium carboxymethylstarch
	Sodium starch Phosphate
	Sodium polyacrylate
	Methyl cellulose
Antioxidant	Erythorbic acid
	Sodium erythorbate
	Guaiac gum
	Dibutyl hydroxy toluene

TABLE 18 (cont'd)

CLASS NAMES OF FOOD ADDITIVES TO BE USED FOR LABELLING

Class Name	Food Additive
Antioxidant (cont'd)	Nordihydroguaiaretic acid Butyl hydroxy anisol Propyl gallate
Color Fixing Agent	Sodium nitrite
One of the following names should be selected according to the function of use: Synthetic, preservative, bleaching agent, antioxidant.	Sodium bisulfite Sodium sulfite Sodium hyposulfite Sulfur dioxide Potassium metabisulfite
Synthetic Bactericides when mainly used to sterilize foods. Bleaching Agent when mainly used to bleach foods.	*Hydrogen peroxide Calcium hypochlorite Bleaching powder Hypochlorous acid Sodium hypochlorite
Color Fixing Agent when mainly used to fix color of foods. Fermentation Inhibitor when mainly used to prevent fermentation of foods.	Potassium nitrate Sodium nitrate

* According to a decree by the Ministry of Health and Welfare on February 20, 1980, hydrogen peroxide can not be used as a food additive after October 1, 1980.

TABLE 19-a

MANUFACTURING PROCEDURES OF SALTED HERRING ROE

Manufacturing Steps

1. Removal of blood and hardening

   The roe is extracted from the fish with sufficient care so as not to damage the product. The roe is then soaked for 2 to 3 days in a 5^{0} Bè saline solution to remove blood and cause hardening. During this procedure, the water is changed several times. The procedure of hardening employs salt sprinkling.

2. Bleaching with hydrogen peroxide (H_2O_2) *

   Following the procedures of blood removal and hardening, the roe is soaked in a bleaching solution of 0.5 to 1.0% hydrogen peroxide and 10^{0} to 15^{0} saline solution. The proper quantity of the bleaching solution is about 3 times the quantity of roe. The roe is immediately removed from the solution upon completion of a bleaching cycle of 24 to 48 hours. The roes vary widely in their individual characteristics and are seldom bleached completely in a single cycle. Therefore, following the initial bleaching cycle, the roes which have received incomplete bleaching are hardened again under salt sprinkling and subjected to another bleaching cycle.

3. Washing

   In order to remove hydrogen peroxide from the surface of the roe, the roe is washed either in pure water or in a 5^{0} Bè saline solution for 2 to 3 hours.

4. Application of enzyme

   Approximately 20 to 30kg of roe is soaked in water 2 to 3 times the quantity of the roe containing 1g of enzyme (Hydroperoxidase "nagase"). Salinity must be maintained around 10^{0} Bè. The enzyme must be dissolved first with pure water in a separate small container. The H_2O_2 concentration would usually drop below 30ppm in 16 to 18 hours of soaking, although this may vary depending upon the quality of the roe being treated.

5. Washing

   Following the application of enzyme, the product is washed thoroughly in salt solution and drained until drip-free.

6. Packaging

   The product is sorted into different quality classes and packaged according to the standards prescribed by the Hokkaido Federation of Fishery Cooperatives.

TABLE 19-a (cont'd)

Method to Confirm the Removal of H_2O_2 Used as Bleaching Agent *

In order to confirm whether or not the H_2O_2 residue in the product has been reduced to less than 30ppm, the following test is necessary.

1. Preparation of reagent

   a. 2N sulfuric acid solution. Prepare a 1-liter solution by adding 56cc sulfuric acid to 944cc distilled water.
   b. 0.4% ammonium thiocyanate solution. Prepare a 1-liter solution by adding distilled water to 4-g ammonium thiocyanate.
   c. Ferrous sulfate. Prepare ferrous sulfate powder in a small bottle.

2. Test procedures

   a. Mix equal amounts of solutions (a) and (b) in a test tube.
   b. Take a piece of roe from the middle part (i.e. the thickest section) of the roe, and place it in the test tube. The amount of roe being placed in the tube should be about half the combined weight of solutions (a) and (b). It is convenient to use 2.5g of roe in 5cc of combined solution.
   c. Add 10mg of ferrous sulfate, stir the mixture and leave for about 10 minutes.
   d. Compare the brown coloration of the test solution against the color of the standard 30ppm solution. If the former is darker, the washing cycle must be repeated to bring the H_2O_2 residue below 30ppm.

3. Cautions

   a. The roe which has been used in the above test must be discarded as it has been rendered poisonous by the test chemicals.
   b. The standard solution is affected by ultraviolet light. It should be kept out of light.

* According to a decree by the Ministry of Health and Welfare on February 20, 1980, hydrogen peroxide can not be used as a food additive after October 1, 1980.

TABLE 19-b

QUALITY STANDARDS OF SALTED HERRING ROE
(Hokkaido Federation of Fisheries Cooperative Association)

Quality

Blue Label
Excellent bleaching. Excellent maturity and hardness. Excellent salt absorption. Excellent drain. Free of frozen, broken or damaged roes.

Red Label
Fair bleaching. Other standards the same as for Blue Label.

Purple Label
Slightly poor bleaching. Other standards the same as for Blue Label.

Yellow Label
Poor bleaching. Inferior to Purple Label in maturity and hardness. Other standards the same as for Blue Label.

Color and Sheen

Blue Label
Yellow or light yellow. Clean

Red Label
Yellowish brown, or white as a result of color deterioration. Clean.

Purple Label
Reddish brown. Fairly clean.

Yellow Label
Inferior to Purple Label in color. Unclean.

Flavor

Blue Label
Free from impure odor or taste.

Red Label
Same as for Blue Label.

Purple Label
Trace of impure odor or taste.

Yellow Label
Inferior to Purple Label.

Shape

Blue Label
Uniform shape.

TABLE 19-b (cont'd)

Red Label
Fairly uniform shape.

Purple Label
Irregular shapes.

Yellow Label
Inferior to Purple Label.

Size and Weight

Blue Label
Over 7cm in length and 10g in weight.

Red Label
Over 5cm in length.

Purple Label
Over 2cm in length.

Yellow Label
Less than 2cm in length.

H_2O_2 Residue*

When H_2O_2 has been used as bleaching agent, the H_2O_2 residue should be below 30ppm.

Red Label
Same standards as for Blue Label.

Purple Label
Same standards as for Blue Label.

Yellow Label
Same standards as for Blue Label.

Foreign Matters

Blue Label
None.

Red Label
None.

Purple Label
None.

Yellow Label
None.

* According to a decree by the Ministry of Health and Welfare on February 20, 1980, hydrogen peroxide can not be used as a food additive after October 1, 1980.

TABLE 19-b (cont'd)

Note: 1. Frozen, broken or damaged roe may consist of each or all of the following:

Mijukuran:	Immature roe, lacking resilience and easy to crumble.
Tohko:	Frozen roe, with broken sacs and roe particles.
Furiko:	Coagulated roe particles which have been spawned out from the fish body.
Awako:	Separated roe particles as a result of the breakage of sacs.
Han-nariko:	Semi-mature roe, lacking resilience.

2. In principle, tests for H_2O_2 residue should be performed at a nearby food sanitation department. However, preliminary tests should also be conducted at each processing plant to gain a general idea on the H_2O_2 residue.

1. Size gradings and their corresponding definitions for salted herring roe are as follows:

Size Grading	Definition
Extra Extra Large	Roe length over 14cm, weight over 30g
Extra Large	Roe length 12 - 14cm, weight over 30g
Large	Roe length 10 - 12cm, weight over 20g
Medium	Roe length 8 - 10cm, weight over 15g
Small	Roe length over 7cm, weight over 10g
Large, broken	Roe length over 10cm, weight over 20g
Broken	Roe length over 7cm, weight over 15g

2. Labeling of Size Grading
The manufacturers must display the following labels for size grading on the readily visible part of the package in accordance with the prescribed standards:

Size Grading	Label	Letter Size
Extra Extra Large	LLL	Over 3cm
Extra Large	LL	Over 3cm
Large	L	Over 3cm
Medium	M	Over 3cm
Broken	Broken	Over 3cm
Small	S	Over 3cm

TABLE 19-b (cont'd)

3. Labeling of Fish Origin
The manufacturers must display the following labels for fish origin on the readily visible part of the package in accordance with the prescribed standards:

Fish Origin	Label	Letter Size
Chinese salted herring	㊥塩	Over 3cm
Chinese frozen herring	㊥冷	Over 3cm
Olyutorski herring	オ	Over 3cm 1/
Alaska, Canadian herring	ア	Over 3cm 2/
Atsukishi herring	厚	Over 3cm

1/ Includes catches north of 52^{o}N, west of Kamchatka.
2/ Includes Alaska herring and Canadian herring.

4. Overfill

Mature roe: 2%
Semi-mature roe: 3%

5. Labeling requirement by food sanitation codes.
The following labeling requirement, as prescribed by the food sanitation codes, must be strictly observed by all concerned:

Items to be labeled: Product name; plant location; manufacturer's name; year, month and date of manufacture; declaration of food additives used (i.e. "Contains Synthetic Bacteriocide" if H_2O_2 was used).

Example:

20 Minatomachi, Mombetsu City, Mombetsu County, Hokkaido
Manufacturer: Kaitaro Umino
Manufactured Date: April 20, 1973
Contains Synthetic Bacteriocide

TABLE 19-c

QUALITY STANDARDS FOR SEMI-MATURE HERRING ROE

Semi-mature herring roe presents the appearance of comb teeth on the roe surface and lacks resilience. The common name is "magaiko".

1. Identification
   The semi-mature roe must be sorted and packaged separately from either mature or immature roes.

2. Container
   The container should be a brand-new box carrying the same size-grading labels as those for mature roe.

3. Packaging Quantities and Overfill
   Packaging quantities are 2kg, 5kg or 10kg to the case. Overfill should be 3%.

4. Size Grading
   Labeling system for size grading is the same as for mature roe.

5. Labeling of Fish Origin
   In order to distinguish semi-mature roe from mature or immature roes, a marking (ま) must be placed on the readily visible part of the package.

Fish Origin	Label	Letter Size
Chinese herring	チオ	Over 3cm 1/
Olyutorski herring		Over 3cm 2/
Alaska & Canadian herring	アラ	Over 3cm
Atsukishi herring	厚	Over 3cm
Okizashi herring	沖	Over 3cm

1/ Includes frozen and salted Chinese herring.
2/ Includes catches north of 52°N and west of Kamchatka.

6. H_2O_2 Residue *
   The manufacturers must ensure that the products contain less than 30ppm of H_2O_2 residue before the products are shipped out.

* According to a decree by the Ministry of Health and Welfare on February 20, 1980, hydrogen peroxide can not be used as a food additive after October 1, 1980.

TABLE 19-d

QUALITY STANDARDS FOR IMMATURE HERRING ROE

Immature roe lacks resilience due to the immature nature of the roe.

1. Identification
   The immature roe must be sorted and packaged separately from either mature or semi-mature roes.

2. Container
   The container should be a brand-new box with the same size-grading labels as those for mature roe.

3. Packaging Quantities and Overfill
   Packaging quantities are 5kg and 10kg. Overfill should be 3%.

4. Size Grading
   Labeling system for size grading is the same as for mature roe.

5. Labeling of Fish Origin
   In order to distinguish immature roe from either mature or semi-mature roes, a marking (若子) must be placed on the readily visible part of the package along with the following labels disclosing the fish origin.

Fish Origin	Label	Letter Size
Chinese herring	チオア	Over 3cm 1/
Olyutorski herring		Over 3cm 2/
Alaska & Canadian herring		Over 3cm
Atsukishi herring	厚	Over 3cm
Okizashi herring	沖	Over 3cm

1/ Includes frozen and salted Chinese herring.
2/ Includes catches north of 52°N and west of Kamchatka

6. H_2O_2 Residue *
   The manufacturers must ensure that the products contain less than 30ppm of H_2O_2 residue before the products are shipped out.

* According to a decree by the Ministry of Health and Welfare on February 20, 1980, hydrogen peroxide can not be used as a food additive after October 1, 1980.

TABLE 19-e

PACKAGING STANDARDS FOR SALTED HERRING ROE

1. Packaging Quantity
   1kg or 2kg to the case for mature roe; 2kg, 5kg or 10kg to the case for semi-mature roe; 5kg or 10kg to the case for immature roe. A brand-new box should be used for the package.

2. Interior Packaging
   Use 0.44mm polyvinyl sheet with square bottom.

3. Exterior Packaging
   a. Use a carton case with 4 to 5 folding flaps.
   b. After packaging, apply 2 horizontal and 1 vertical lashings of Kraft band.
   c. The vertical lashing of Kraft band should be colored-coded to disclose the product quality, using the following color designations:

      Blue Kraft band for blue-label product
      Red Kraft band for red-label product
      Purple Kraft band for purple-label product
      Yellow Kraft band for yellow-label product

4. Labeling
   a. Labeling on side panels:
      Logo of the fishery cooperative; name of the fishery cooperative; name of the product.
   b. Labeling on top panel:
      Location of manufacture; manufacturer's logo; color-coded trade name (colors to correspond to quality color-coding standards).
   c. Labeling should be applied by offset printing except for color-coded trade names.

TABLE 20-a

KEY TECHNOLOGY IN THE MANUFACTURING OF SHORE-PROCESSED FROZEN SURIMI (MINCED FISH MEAT)

1. Selection of Raw Fish Material

A fish species or fish having the following properties is most desirable.

a. White meat
b. The flesh can be readily separated from skin or bones
c. High flesh to fish ratio
d. Low fat content in the flesh

Additional desirable properties include freshness of the fish and the availability of a fairly constant rate of delivery to the processing plant.

2. Selection of Water

The water being used in the processing should preferably be about 8^{o} to $12^{o}C$, and soft water (pH 6.5 - 7.0).

3. Maintenance of Freshness of the Fish After Delivery to the Plant

Apply crushed ice or soak the fish in a water-ice mixture.

4. Sanitation Control of the Plant

a. Wash hands and shoes at the entrance.
b. Encourage cleaning and washing of machinery and equipment at the end of each day.
c. Wastes being produced in the plant should be placed immediately on an automatic belt conveyer to be removed from the plant.
d. Following the delivery of the raw fish to the plant, wash the fish immediately to remove coliform organisms.
e. Residual coliform organisms in the manufactured frozen surimi is sterilized during heat processing of kneaded products.

5. Manufacturing Procedures

The procedures are divided broadly into the salt-free and salted methods. Explained in this memorandum is the method for salt-free product which is being used in 98 percent of surimi production in Japan.

6. Manufacturing Procedures for Salt-free Product

a. Preparation - Remove head and guts either mechanically or manually and wash the fish thoroughly.
b. Separate meat mechanically.
c. Water leaching of fish flesh. This procedure aims at removing water-soluble protein in the fish which is often responsible for denaturation of the fish protein during forzen storage. Change water several times in a leaching tank during this procedure. In order to make up for incomplete leaching or to improve the product quality, emulsifying agents are added in subsequent processes.

TABLE 20-a (cont'd)

KEY TECHNOLOGY IN THE MANUFACTURING OF SHORE-PROCESSED FROZEN SURIMI (MINCED FISH MEAT)

d. Dewatering - Dewater the leached meat with screw press, while keeping the temperature of the meat within 10°C.

e. Apply additives - Approximate standard composition of the additives is:

sucrose	4.0%
sorbitol	4.0%
polyphosphate	0.3%
emulsifying agent	0.3%
totaling	8.6%

This mixture is blended in a mixer before applying to the meat. Sucrose and sorbitol are being used for the purpose of preventing denaturation of the protein during frozen storage.

f. Shaping - Fill 10kg of surimi into polyvinyl bag.

g. Freezing, packaging and storage - After freezing the product sufficiently at below -30°C, package each two 10kg bags into a carton box or thick-walled paper box, and indicate quality standards, manufactured date, and plant name on the box. Store the products in a freezer at about -20°C. Storage life of the product manufactured by the standard procedures is guaranteed for up to about one year.

h. Shipping - Shipping is done in a freezer truck or refrigeration truck using dry ice.

TABLE 20-b

NEW STANDARDS FOR SHORE-PROCESSED FROZEN SURIMI

Alaska Pollock, special grade:
Sugar 4%; puribesuto TP433 4.6%; puribesuto TP423 0%; moisture 77.00%; Test Standards - product without starch content, resilience standard 350g, folding strength AA.

Alaska Pollock, grade 1:
Sugar 4%; puribesuto TP433 4.6%; puribesuto TP423 0%; moisture 78.00%; Test Standards - product with starch content 3%; resilience standard 330g, folding strength AA.

Alaska Pollock, grade 2:
Sugar 4%; puribesuto TP433 4.6%; puribesuto TP423 0%; moisture 79.5%; Test Standards - product with 5% starch content, resilience standard 300g, folding strength AA.

Alaska Pollock, below grade 2:
Sugar 4%; puribesuto TP433 4.6%; puribesuto TP423 0%; moisture 80.00%; Test Standards - product with 7% starch content, resilience standard 300g, folding strength AA.

Atka Mackerel, grade 1:
Sugar 4%; puribesuto TP433 0%; puribesuto TP423 4.5%; moisture 77.00%; Test Standards - product with 3% starch content, resilience standard 330g, folding strength AA.

Atka Mackerel, grade 2:
Sugar 4%; puribesuto TP433 0%; puribesuto TP423 4.5%; moisture 77.00% Test Standards- product with 5% starch content, resilience standard 300g, folding strength AA.

Blenny (Stichaeus grigorjew), special grade:
Sugar 4%; puribesuto TP433 4.6%; puribesuto TP423 0%; moisture 77.00%; Test Standards - product with no starch content, resilience standard 350g, folding strength AA.

Blenny, grade 1:
Sugar 4%; puribesuto TP433 4.6%; puribesuto TP423 0%; moisture 78.00%; Test Standards - product with 3% starch content, resilience standard 330g, folding strength AA.

Note 1. When responding to a special order which will not meet the revised standards, the following procedures shall be taken:

(1) Obtain approval from the Federation prior to actual production.
(2) Display the label "special-order quality standards" on the package.
(3) Identify special-order items in the report to the Federation.

Note 2. Contents of TP additives:

(1) TP433 contains D-sorbitol 4%, polyphosphate 0.3%, and other additives 0.3%.
(2) TP423 contains D-sorbitol 4%, polyphosphate 0.2%, and other additives 0.3%.

TABLE 20-C

STANDARDS OF QUALITY TESTS FOR FROZEN SURIMI

Frozen Surimi Tests

Moisture Content Measurement:
Test sample 5 - 10g; use infrared moisture gauge(when an air bath is being used, thaw about 200g middle-portion of surimi wrapped in a vinyl bag in a refrigerator, use about 5g for the test.)

pH Measurement:
Test sample 10g; add water 10 parts in weight; mince and stir in a blender; measure pH in a pH meter.

Whiteness and Clarity:
Measure as needed; describe details of measurement conditions.

Foreign Substances:
Use conventional procedures; methods to be investigated further.

Pressurized Drip Test:
Do as needed.

Kamaboko Tests

Preparation of Test Samples:
Frozen surimi 100 parts, salt 3 parts, potato starch: make two samples either with and without potato starch; grinding to be completed within 30 minutes consisting of 5 minutes of grinding for surimi, 15 minutes of grinding with salt and 10 minutes of finishing grinding; temperature of sample less than 10°C when finished.

Casing:
Diameter 48 m/m; finish about 150g for a 20cm piece.

Heating Method:
30 - 40 minutes at 90°C; a 20-minute heating at 50°C also may be tried.

Cooling Method:
Rapid cooling in running water and leaving overnight at room temperature; sample temperature should be 20 - 30°C.

Resilience Measurement:
Choice of apparatus free; test sample 25 m/m thick; number of test samples 7; measured values - average of 5 samples excluding maximum and minimum values; plunger diameter 5 m/m Ø; gel strength = W(g) x L(cm), in which W(g) is dent pressure in grams and L(cm) is dent length in cm.

Whiteness and Clarity Measurement:
Sample thickness 9 m/m - 25 m/m; measured value - average of 5 samples. Measurement should take place without delay after preparation of test samples.

TABLE 20-C (cont'd)

Sensory Tests:
Sample thickness 5 m/m; score 10-point system; test criterion = elasticity:

Score	
10	extremely strong
9	very strong
8	strong
7	fairly strong
6	slightly strong
5	weak
4	almost no elasticity
3	no elasticity
2	slightly crumbly
1	crumbly

Folding Tests:
Sample thickness 5 m/m; score 5-step system:

Score	
AA	No cracks on folding into quarters
A	No cracks on folding in half
B	Half cracking on folding in half
C	Completely breaks on folding in half
D	Crumbles upon finger pressure

TABLE 21

QUALITY STANDARDS FOR SALTED POLLOCK ROE

Quality

Blue Label
Good maturity. Thorough removal of blood in the blood vessels on the surface of roe sac. Sac fully packed with roe particles. Sufficient salt absorption.

Red Label
Fair maturity. Fair removal of blood in the blood vessels on the surface of roe sac. Sac fairly packed with roe particles. Sufficient salt absorption.

Purple Label
Slightly tending to be "mizuko". Slightly immature. Roe sac less than full. Sufficient salt absorption.

Yellow Label
Yellow Label "jo" (super) is classed below Purple Label in quality, slightly tending to be "mizuko" and slightly immature with much bile attached to roe sac. Yellow Label "nami" (ordinary) is classed below Purple Label in quality, fully mature but deemed to have been partly spawned out. The roe sac stays tight after salt application. Yellow Label "mizu" (water) is immature roe partly spawned out, stays tight after salt application. Yellow Label "kire" (cut) A is broken roe over 5cm in length. Yellow Label "kire" (cut) B is broken roe with length over 2.5cm but less than 5cm.

White Label
Kawako, gamuko or barako. Slightly tending to be "murasakiko". Very little content of roe particles. Sufficient salt absorption.

Color and Sheen

Blue Label
Good color and sheen. No attachment of bile. No attachment of other foreign matters.

Red Label
Average color and sheen. Slight attachment of bile. No other attached foreign matters.

Purple Label
Slightly poor color and sheen. Attachment of bile not excessive. Slight attachment of other foreign matters.

Yellow Label
Poor color and sheen. Slight attachment of other foreign matters.

White Label
Color and sheen poorer than yellow label. Large amounts of other attached foreign matters.

Flavor

Blue Label
Displays characteristic flavor.

Red Label
Displays characteristic flavor.

Purple Label
Flavor not lost.

Yellow Label
Displays no offensive odor.

White Label
Displays no offensive odor.

Shape

Blue Label
Uniform shape, no damaged sac.

Red Label
Uniform shapes, little damage on roe sac; may include roes with sac wounds less than 20% of the roe length, but keeping good shape.

Purple Label
Partially broken (yabureko) or partially cut (kireko) sacs, but keeping good shape. May include cut roes (kireko) as follows:

a. Those ranked equal to or above Red Label, having sac wounds over 70% of roe length.
b. Those ranked equal to Purple Label, having sac wounds over 80% of roe length.

Yellow Label
Cut roe (kireko) and broken roe (yabureko).

White Label
Inferior to Yellow Label.

Weight

Blue Label
Classification of roe weight:

SS:	Over 23g and less than 30g
S:	Over 30g and less than 60g
M:	Over 60g and less than 110g
L:	Over 110g and less than 150g

Red Label
Classification of roe weight:

S:	Over 23g and less than 60g
M:	Over 60g and less than 110g
L:	Over 110g and less than 190g
LL:	Over 190g

Purple Label
Classification of roe weight:

S:	Less than 60g
M:	Over 60g and less than 110g
L:	Over 110g and less than 190g
LL:	Over 190g

Size

Uniform sizes for Blue, Red and Purple Labels.

Amount of Salt

Adequate amount of salt and sufficient drain for all labels.

Foreign Matters

No foreign matters for all labels.

Note

1) "Mizuko" denotes those mature roes which are deemed to have partially spawned out, and which fail to retain tight sac configuration when applied with salt.
2) "Murasakiko" denotes those roes which present brownish dark purple color on the roe sac surface.
3) "Kawako" denotes those roes which have lost almost all the roe particles inside the sac.
4) "Gamuko" denotes those roes which present thick roe sac skins, and which contain either no roe particles inside the sac, or too few particles for recognition.
5) "Barako" denotes roes without roe sac.
6) "Yabureko" denotes roes with partially damaged or broken sac.
7) "Kizuko" denotes roes with partially cut sac.

A. The following quality displays should be used:

1. "Kireko" for kireko and yabureko.
2. "Kawako' for kawako.
3. "Gamuko" for gamuko.
4. "Barako" for barako.

B. The following package displays should be used:

Weight display for each roe:

1. Size SS should be "SS" or "S"
2. Size S should be "S"
3. Size M should be "M"
4. Size L should be "L"
5. Size LL should be "L" or "L"

Yellow Label displays:

1. Yellow Label "jo" (1) should be stamped "Jo"
2. Yellow Label "nami" (2) should be stamped "nami"
3. Yellow Label "mizu" should be stamped "mizu"
4. Yellow Label "kire-Jo" should be stamped "kire-Jo"
5. Yellow Label "kire-Nami" should be stamped "kire-Nami"

C. Color coding tapes for weight designation

1. For SS, two strips of blue vinyl tapes in series.
2. For S, one strip of blue vinyl tape.
3. For M, one strip of red vinyl tape.
4. For L, one strip of yellow vinyl tape.
5. For LL, two strips of yellow vinyl tapes in series.

TABLE 22

QUALITY STANDARDS FOR FROZEN SALMON

Grade	Spawning Color	Freshness	Scars and cutting miss
A	None	Without protruding ribs and flesh must be resilient	None
B	Slight spawning color	Same as A	None
C	Same as A or B	Maximum 10% of protruding ribs and no deformation	Less than two and each smaller than two inches in length
D	Same as A or B	Lower than other grades but no bad odor	More than three, each can be larger than two inches

TABLE 23-a

IMPORT STANDARDS FOR SUJIKO (SALMON ROE)

1. Definition

The Import Standards hereunder relate to imported Sujiko products produced from fresh eggs of the following fish under clean and hygienic condition.

CHUMS	Oncorhynchus keta	(WALBAUM)
COHOES	Oncorhynchus kisutch	(WALBAUM)
PINKS	Oncorhynchus gorbuscha	(WALBAUM)
SOCKEYES	Oncorhynchus nerka	(WALBAUM)
KINGS	Oncorhynchus tschawytscha	(WALBAUM)

2. Quality Standards Form

Chums and Kings:
The shapes of the roes to be even; any tearing, collapsing or other breakage to the roes or eggs to be limited. The length of the roes to be minimum 18 cm and to weigh minimum 100 grams after removal of the torn, collapsed or damaged parts.

Pink, Cohoes, and Sockeyes:
The shapes of the roes to be even; any tearing, collapsing or other breakage to the roes or eggs to be limited. The length of the roes to be minimum 15 cm and to weigh minimum 50 grams after removal of the torn, collapsed or damaged parts.

Color

The roes to be of natural color, without any black, yellow or other discoloration and to be clean and free of any dirt.

Odor

The roes to be free of any unusual taste or odor due to deterioration in quality.

Salinity

The salinity of the products to be even and moderate.

Drying or oxidation

The roes to be virtually free of drying or oxidation.

Texture

The roes to be firm in texture.

Foreign matter

The roes to be free of any foreign matter.

TABLE 23-a (cont'd)

Frozen or immature eggs

Roes are not to be produced from immature or frozen eggs.

NO_2 radical

The contents of the NO_2 radical to be less than 0.005 grams per kilograms (5 ppm).

3. Inspection Method

The methods of inspection are to be subject to endorsement by the Japan Imported Marine Products Inspection Corporation.

* Industrial standards

TABLE 23-b

MANUFACTURING PROCEDURES FOR SALMON ROE (SUJIKO)

FLOW DIAGRAM

Raw Material

↓

Wash with water, drain

↓

Stir in Saturated Saline Solution Containing Sodium Nitrite (measure concentration of NO_2^- in the stirring Medium)

↓

Drain

↓

Sort

↓

Curing (measure concentration of NO_2^-)

↓

Inspect Color and Curing (measure concentration of NO_2^-)

↓

Place in Cold Storage

TABLE 23-c

APPLICATION OF SODIUM NITRITE TO SALMON ROE

AS COLOR FIXING AGENT

1. Prepare the initial stirring medium as follows:

   a. Prepare 200 liters of saturated saline solution (Bè $25^{o}/15^{o}C$, salometer should indicate 100%).
   b. Dissolve 20g of $NaNO_2^-$ crystal in the above medium to obtain $NaNO_2^-$ 100 ppm solution (66.7 ppm for NO_2^-).

Note: 1. $NaNO_2^-$ crystal absorbs moisture. It should be kept in a dry state in exact weight of 20g until ready for use.
2. When using different quantities of saturated saline solution, prorate the amount of $NaNO_2^-$ crystal to add to ensure that the resulting solution contains 100 ppm $NaNO_2^-$.
3. The material to be placed in the above medium should be 60kg (or 132 lbs.) in weight.

2. When the stirring medium is being used more than once, the $NaNO_2^-$ content should be adjusted as follows:

To replace the expended amount of $NaNO_2^-$ during the first stirring, add 2g of $NaNO_2^-$ each time the stirring medium is being re-used. The reason is as follows: Upon completion of the stirring cycle, approximately 10 - 20ppm of $NaNO_2^-$ is known to have been absorbed into sujiko from actual measurements. Since:

$$\frac{NO_2^-}{NaNO_2^-} = \frac{46}{69} = \frac{2}{3}$$

an absorption of 10ppm of NO_2^- would mean the loss of 15ppm of $NaNO_2^-$ or 0.9g per each 60kg of test material. Likewise, an absorption of 20ppm of NO_2^- would correspond to 1.8g of $NaNO_2^-$. The loss of NO_2^- in the stirring medium is known to be 5 - 7ppm from actual measurements. Hence, the loss of $NaNO_2^-$ in a 200 liter medium amounts to 1.5 - 2.1g, or approximately 2g.

Note: As in Notes 1 and 2, $NaNO_2^-$ crystal should be measured in exact amount under dry conditions.

3. Method to measure NO_2^- concentration in the stirring medium as a check will be described elsewhere. Using this method, one should strive to maintain a consistent level of $NaNO_2^-$ concentration in all the media being used successively.

Note 1. The quantity of material and the duration of stirring should be kept constant throughout all the tests.

Note 2. The required stirring time varies by fish species. Therefore, it is desirable to use the same species for a stirring tank being used repeatedly.

4. Checking of Products. Cumulative amount of NO_2^- added in the stirring medium should equal the amount of NO_2^- contained in the final products, provided that the above instructions 1 through 3 have been strictly followed. Take random samples of the product (a total of about 40 - 50 samples) by each fish species and product curing date and display the amount of NO_2^- contained in the samples in a graph correlating the residual NO_2^- against curing dates, an NO_2^- control graph. Using this NO_2^- control graph, the date in which no single sample would contain more than 3ppm of NO_2^- may be considered the maturing date. Following this date, only occasional checks of products are necessary. Also, occasional checks on the NO_2^- concentration in the stirring medium may be made.

5. Cautions

a. When the raw material lacks freshness, the absorption of salt generally increases which in turn causes an increase in the absorption of $NaNO_2^-$. Since the absorption of salt and $NaNO_2^-$ is correlated, when using the raw material with insufficient freshness, it is advisable to decrease the stirring time while increasing the salt content in the medium. If for some reason the stirring time has to

be long, the $NaNO_2^-$ content in the stirring medium must be decreased.

b. Coloration of the finished product would not improve even if a greater than necessary amount of $NaNO_2^-$ is used in the medium. The larger the amount of $NaNO_2^-$ absorbed in sujiko, the slower the reduction rate of NO_2^- during the curing. Lengthening of the curing period or modification of the curing conditions would only contribute to deterioration of the quality of sujiko. Moreover, it would be impossible to reduce the residual NO_2^- below 5ppm. Bearing in mind the current controversy over the safety of food additives, it is recommended to exercise sufficient caution in the quantity of $NaNO_2^-$ to be used.

TABLE 24

IMPORT STANDARDS FOR FROZEN SQUID AND CUTTLEFISH

1. Quality Standards

Form and shape
The form, trimmed or untrimmed, should be good, having no cuts, splits or any other wounds and having had the head and tentacled section, the cuttlebone, the fin and the outer skin removed.

Temperature
The temperature of the squid or cuttlefish should be -18°C.

Foreign substances
No foreign substance should be attached to or mixed with the fish.

Packaging
Packaging material and methods should sufficiently satisfy the quality and the use of the foodstuff in question.

Package content
The package weight should be identical to the stated weight. The squid and cuttlefish should be of the same size and should not be packed with the outer skin, the cuttlebone, the suckers, etc., still attached.

Bloom
The squid and cuttlefish which are packed should possess their natural bloom, should not be blue or in any other way discolored and should not be smeared with ink.

Smell
The fish should have a good smell, without any bad odor.

Flesh condition
The flesh of the fish should be firm.

Sanitary inspection standards
Squid and cuttlefish should meet the following sanitary standards.

Number of bacteria	:	5 million or less per gram
E. coli	:	Negative
Volatile basic nitrogen	:	25 miligrams or less per 100 grams

2. Size Grading

The squid or cuttlefish are graded according to the following sizes:

a. Sepia

No.	Weight (Per Tail)
K1	Over 2kg
K2	1.00kg to 2.00kg
K3	0.70kg to 1.00kg
K4	0.50kg to 0.70kg
K5	0.25kg to 0.50kg

TABLE 24 (cont'd)

b. Southeast Asian squid and cuttlefish. No. of tails per kilogram.

1 - 2	13 - 20
3 - 4	21 - 40
5 - 7	41 - 50
8 - 12	51 - 80
	81 or more

Depending on buyer requirements, squid and cuttlefish from Southeast Asia may be graded accordingly:

21 - 40 (per kilogram)
41 - 50
51 - 60
61 - 80

The squid and cuttlefish are marketed according to the above standards. Since squid and cuttlefish prices vary according to such gradings, different sizes should not be packed together.

TABLE 25

IMPORT STANDARDS FOR SHRIMP

1. Scope

This standard shall apply to frozen* shrimps (prawns) with shell and frozen headless shrimps (prawns) with shell imported to Japan.

* Term "frozen" is taken to include such terms as "deep-frozen" and "quick-frozen".

2. Standard

Sum of score points in accordance with the specified scoring standard shall average above 3.0 and shall not be 1.0 in any single instance.

Temperature
The temperature shall be below -18°C at the internal center of the product.

Net Weight
The net weight of the product shall not be less than the amount labeled.

Packaging materials
Packaging materials shall be hygienic and strong enough to protect the product from any damages by external force.

Labeling
The labeling shall be truthful to, and correctly representative of, the name and nature of the product.

Extraneous substance
There shall be no extraneous substance either on the surface, or inside the product.

Size
The size of shrimps (prawns) shall conform to the size classes labeled.

Examination of the net weight is made as follows:

a. Thawing:

A block of the sample is placed in a water-proof bag. The bag is soaked in flowing or still potable water until individual shrimps (prawns) can be easily separated from the block.

b. Weighing:

The bag is emptied on to a sieve with mesh appropriate to the size of the shrimps (prawns). After draining for about 2 minutes, the sieve is weighed. The temperature of the internal center of the product just before and after thawing, and the temperature of the thawing water and the duration of thawing shall be examined.

TABLE 25 (cont'd)

3. Standard for Scoring	Score Points
Appearance	
1. The whole shrimp (prawn), which retains the original form without being split or broken.	5
The headless shrimp (prawn), which has the head part ("carapace" in technical terms) completely removed, and holds the good form without being split or broken.	
2. The whole shrimp (prawn) which retains the fairly good form, or is slightly split or broken.	
The headless shrimp (prawn), which has the head part almost completely removed, and holds the fairly good form, or is slightly split or broken.	4-3
Score points 4 or 3 may be assigned depending upon the degree of the above mentioned defects.	
3. The whole shrimp (prawn), which does not retain the good form, or is split or broken.	2
The headless shrimp (prawn), which retains portions of the head unremoved, does not hold the good form, or is split or broken.	
4. The whole shrimp (prawn) which is disfigured conspicuously, or is split or broken conspicuously.	1
The headless shrimp (prawn), which retains the greater portion of the head unremoved, or is disfigured, split or broken conspicuously.	
Color	
1. The shrimp (prawn), which retains characteristic color of the particular species, with no sign of grayish white color associated with dehydration, or other change of color.	5
2. The shrimp (prawn) which retains fairly good original color or exhibits slight sign of grayish white color associated with dehydration, or other change of color.	4-3
Score points 4 or 3 may be assigned depending on the degree of the above mentioned defects.	
3. The shrimp (prawn) which does not retain good color, or exhibits sign of grayish white color caused by dehydration or other change of color. The shrimp (prawn) which possesses dark color in the tail part.	2

TABLE 25 (cont'd)

	Score Points
4. The shrimp (prawn) which is distinctly discolored red or exhibits conspicuous signs of grayish white caused by dehydration, or other change of color.	1

Flavor and Odor

1. The shrimp (prawn) which retains good original flavor is free from odors of hydrogen sulphide, ammonia, trimethylamine odors, or any other that is not characteristic of particular species of shrimps (prawns).	5
2. The shrimp (prawn) which retains fairly good flavor, or is almost free from odors of hydrogen sulphide, ammonia, trimethylamine or any other that is not characteristic of particular species of shrimps (prawns).	4-3
Score points 4 or 3 may be assigned depending on the degree of the above mentioned defects.	
3. The shrimp (prawn) which does not retain good flavor, or exhibits odors of hydrogen sulphide, ammonia, trimethylamine or any other that is not characteristic of particular species of shrimps (prawns).	2
4. The shrimp (prawn) which retains hardly any flavor, or exhibits conspicuous odors of hydrogen sulphide, ammonia, trimethylamine or any other that is not characteristic of particular species of shrimps (prawns).	1

Tissue and Texture

1. The shrimp (prawn) whose tissue is reasonably tight and elastic without any sign of sponge-like or other abnormal property that is not characteristic of particular species of shrimps (prawns).	5
2. The shrimp (prawn) whose tissue is fairly tight and elastic or exhibits slight sign of sponge-like or other abnormal property that is not characteristic of particular species of shrimps (prawns).	4-3
Score points 4 or 3 may be assigned depending on the degree of the above mentioned defects.	
3. The shrimp (prawn) whose tissue lacks reasonable or fair tightness and elasticity, or exhibits sign of sponge-like or other abnormal property that is not characteristic of particular species of shrimps (prawns).	2
4. The shrimp (prawn) whose tissue is very soft, or exhibits conspicuous signs of sponge-like or other abnormal property that is not characteristic of particular species of shrimps (prawns).	1

TABLE 25 (cont'd)

	Score Points
Uniformity	
1. The block of shrimps (prawns) which does not mix any different species or "softshell" caused by exuviation.	5
2. The block of shrimps (prawns) which mixes hardly any different species or "softshell" caused by exuviation. Score points 4 or 3 may be assigned depending upon the mixed degree of the different species or "softshell".	4-3
3. The block of shrimps (prawns) which mixes different species or "softshell" caused by exuviation.	2
4. The block of shrimps (prawns) which mixes different species or "softshell" caused by exuviation conspicuously.	1
Undesirable Substances	
1. The block of shrimps (prawns) which is free from splintered shell, spines, legs, or any other undesirable substances separated from the body of the shrimps (prawns).	5
2. The block of shrimps (prawns) which is fairly free from splintered shells, spines, legs, or any other undesirable substances separated from the body of the shrimps (prawns). Score points 4 or 3 may be assigned depending on the mixed degree of the above mentioned undesirable substances.	4-3
3. The block of shrimps (prawns) which contains splintered shells, spines, legs, or any other undesirable substances separated from the body of the shrimps (prawns).	2
4. The block of shrimps (prawns) which contains splintered shells, spines, legs, or any other undesirable substances separated from the body of the shrimps (prawns), conspicuously.	1
Glaze	
1. The glaze which is clean, and thick and even enough to prevent dehydration.	5
2. The glaze which is clean, and fairly thick and even. Score points 4 or 3 may be assigned depending upon the degree of the above mentioned glaze.	4-3
3. The glaze which is clean, but missing in an area on the surface of the block.	2
4. The glaze which is not clean, or is almost entirely missing on the surface of the block.	1

TABLE 25 (cont'd)

4. Sampling and Inspection

The inspection is conducted in accordance with the scoring standard using random samples drawn at the rates proportional to the size of the lots under inspection, as follows:

Any single sample shall be regarded as defective if it does not meet the quality requirement specified in the Quality Standards (2), and any lot shall be classified as "passed" if defective unit count does not exceed the count specified in the column A (passed) of the following score tables and if there is no major defect (e.g. temperature, labeling, extraneous substance and freshness) in the sample.

Score Table for Judgement
(for unit weight over 1 kg)

Size of lot	Count of samples	Count of defective units for judgement	
		A (passed)	B (defective)
1 - 10	All	0	1
11 - 100	10	1	2
101 - 500	15	1	2
501 - 1,000	25	2	3
1,001 - 5,000	35	3	4
More than 5,001	50	4	5

Score Table for Judgement
(for unit weight below 1 kg)

Size of lot	Count of samples	Count of defective units for judgement	
		A (passed)	B (defective)
35 - 1,000	35	3	4
1,001 - 5,000	50	4	5
5,001 - 10,000	75	6	7
10,001 - 20,000	110	8	9
20,001 - 50,000	150	10	11
More than 50,001	225	14	15

LIST OF PROSPECTIVE CUSTOMERS IN SAPPORO, JAPAN

A. Independents and Trading Companies

1. Gyoren (Hokkaido Federation of Fishery Cooperatives)
   Suisan Bldg., Nishi 7, Kita 3, Chuo-ku, Sapporo 060
   Telephone: 011-231-2161
   Contact: Mr. Masao Miyamura, Chamber of Int'l. Fishery

2. Kyokko Suisan Co., Ltd. (Kyokko Marine Products Co., Ltd.)
   7th Floor, Asahi Seimei Bldg., 1-6, 6-chome, Saiwai-cho, Kushiro
   Telephone: 0154-22-3411
   Contacts: Mr. Shigeyoshi Kitano, President
   Mr. Akira Mori, Managing Director

3. Nobu, Inc.
   7-9, Higashikawa-cho, Hakodate
   Telephone: 0138-26-5437
   Contacts: Mr. Takashi Nobuta, President
   Mr. Giichi Nochiyama, Managing Director

4. Kakoren (The Federation of Hokkaido Marine Products Processor's Cooperatives)
   8th Floor, Mainichi Sapporo Kaikan, Nishi 6, Kita 4, Chuo-ku, Sapporo 060
   Telephone: 011-241-0101
   Contacts: Mr. Naonori Kudo, Managing Director
   Mr. Tadashi Kitsugawa, Councilor

5. Ikezawa Shoten
   8-chome, Minato-machi, Monbetsu
   Telephone: 01582-4-2018
   Contact: Mr. Eiji Ikezawa, Vice President

6. Heiwa Reizo (Refrigeration)
   4-16, Asano-cho, Hakodate
   Telephone: 0138-41-6290
   Contact: Mr. Hideo Takeda, Managing Director

7. Takagi Suisan
   2-1, 1-chome, Shin-fuji-cho, Kushiro
   Telephone: 0154-51-0315
   Contact: Mr. Kinjiro Takagi, President

8. Ihara Suisan
   4-12, Funaba-cho, Rumoi
   Telephone: 011-643-2580
   Contact: Choji Ihara, President

9. Utsumi Shoten
   87-banchi, Minato-machi, Yoichi-cho
   Telephone: 01352-3-2107
   Contact: Mr. Katsuo Utsumi, President

10. Kato Suisan
Asahi-machi, Rumori
Telephone: 01644-3-3737
Contact: Mr. Kimio Kato, President

11. Hamamoto Shoten
4-chome, Saiwai-cho, Rumoi
Telephone: 01644-2-3737
Contact: Mr. Takeo Hamamoto, President

12. Sekiya Shoten
1-chome, Oaza Shokan-cho, Mashike-cho, Mashike-gun
Telephone: 01645-3-1353
Contact: Mr. Tatsuji Sekiya, President

13. Hokkaido Gyogyo Kosha (Hokkaido Fishery Corporation)
Akita Bank Bldg., Nishi 4, Kita Odori, Sapporo
Telephone: 011-241-3281
Contact: Mr. Kikuzo Ikeda, President

14. Sato Suisan
6-chome, 3-jo, 24-ken, Nishi-ku, Sapporo
Telephone: 011-621-6111
Contact: Mr. Mitsuo Sato, President

15. Marugo Suisan
Higashi 1, Kita 9, Abshiri
Telephone: 01542-4-5056
Contact: Mr. Kozo Onuma, President

16. Saga Koro Shoten
8-23, 4-chome, Chuo-Wakkanai
Telephone: 01622-3-5167
Contact: Mr. Koro Saga, President

17. Fujii Suisan
10-banchi, 4-chome, Masaki-machi, Nemuro
Telephone: 01532-3-4147
Contact: Mr. Matsuji Ryokaku, President

18. Kikuchi Shoten
3-chome 24, Hanazono, Otaru
Telephone: 0134-25-4560
Contact: Mr. Minoru Kikuchi, President

B. Members of Ichiba Kyokai (Market Association)

Hokkaido Ichiba Kyokai (Hokkaido Market Association)
Suisan Bldg., Nishi 7, Kita 3, Chuo-ku, Sapporo
Telephone: 011-251-2228
Contact: Mr. Tsuyoshi Sasaki, Managing Director
Non-profit organization of Hokkaido wholesale fish markets which provides informational and other services to its members.

1. Takahashi Suisan Co., Ltd.
   Chuo Oroshiuri Ichiba nai, Nishi 22, Kita 13, Chuo-ku, Sapporo
   Telephone: 011-642-3131
   Contact: Mr. Kinichi Kazama, Managing Director

2. (Marusui) Sapporo Chuo Suisan Co., Ltd.
   Chuo Oroshiuri Ichiba nai, Nishi 20, Kita 13, Chuo-ku, Sapporo
   Telephone: 011-643-1234
   Contact: Mr. Kenzo Muto, Managing Director

3. Kyokuichi Asahigawa Chiho Oroshiuri Ichiba
   (Kyokuichi Asahigawa Wholesale Market Co., Ltd.)
   Telephone: 0166-48-3141
   Contact: Mr. Kunijiro Sugawara, President

4. Ichiuroko Obihiro Gyosan Oroshiuri Ichiba Co., Ltd.
   (Obihiro Wholesale Market Co., Ltd.)
   2-banchi, Kita 1, Nishi 21, Obihiro
   Telephone: 0155-37-3333
   Contact: Mr. Jitsuo Tarumi, President

5. Muroran Sakana Ichiba Co., Ltd.
   (Muroran Fish Market Co., Ltd.)
   Chuo Oroshiuri Ichiba nai, 2-chome
   Hinode-cho, Muroran
   Telephone: 0143-44-1311
   Contacts: Mr. Kaichi Tomita, President
   Mr. Minoru Minami, Managing Director

6. Hakodate Sakana Ichiba Co., Ltd. (Hakodate Fish Market Co., Ltd.)
   27-6, Toyokawa-cho, Hakodate 040
   Telephone: 0138-23-4521
   Contact: Mr. Ryozo Takahashi, President

C. Members of Ninushi Kyokai (Packers Association)

Hokkaido Suisanbutsu Ninushi Kyokai
(Hokkaido Marine Products Packers Association)
Suisan Bldg., Nishi 7, Kita 3, Chuo-ku, Sapporo
Telephone: 011-251-8732
Contacts: Mr. Tsuyoshi Sasaki, Managing Director
Non-profit trade association which provides informational and other services to its members.

1. Hokkaido Marufuku Suisan Co., Ltd.
(Hokkaido Marufuku Marine Products Co., Ltd.)
827-banchi, Hassamu, Kotoni, Nishi-ku, Sapporo 060
Telephone: 011-661-0327
Contact: Nobuo Kokubo, President

2. Kanai Gyogyo Co., Ltd. (Kanai Fishery Co., Ltd.)
3-25, 6-chome, Irifune, Kushiro 085
Telephone: 0154-41-9181
Contacts: Mr. Shunichi Kanai, President
Mr. Sekiichi Kanai, Head, President's Office

3. Kaneka Reizo Co., Ltd. (Kaneka Refrigeration Co., Ltd.)
4-2, 1-chome, Washibetsu-cho, Noboribetsu 080
Telephone: 0143-44-8211
Contact: Mr. Kahei Kobayashi, President

4. Kanehachi Suisan Co., Ltd. (Kanehachi Marine Products Co., Ltd.)
27-5, Toyokawa-cho, Hakodate 040
Telephone: 0138-22-2271
Contacts: Mr. Kinichi Kondo, President
Mr. Tadahiko Kondo, Managing Director

5. Kubota Suisan Co., Ltd.
54-banchi, 3-chome, Asahi-machi, Rumoi 077
Telephone: 01644-3-5555
Contact: Mr. Tasohachi Kubota, President

6. Uroko Reito Co., Ltd. (Uroko Refrigeration Co., Ltd.)
10, 3-chome, Hon-cho, Nemuro 087
Telephone: 01532-3-2241
Contact: Mr. Yoshinori Nishimura, President

7. Marutatsu Koshin Reizo Co., Ltd.
(Marutatsu Koshin Refrigeration Co., Ltd.)
3-chome, Komaba-cho, Nemuro 087
Telephone: 01532-3-2131
Contact: Mr. Shoichi Takamoto, President

8. Marutoku Wakui Suisan Co., Ltd.
(Marutoku Wakui Marine Products Co., Ltd.)
100-1, Aza Minato-cho, Akkeshi-cho 088-11
Telephone: 01535-2-2171
Contact: Mr. Tokutaro Wakui, Managing Director

9. Marua Abe Shoten
1-10, Minamihama-cho, Kushiro 085
Telephone: 0154-23-1606
Contact: Mr. Sohachi Abe, President

MEMBERS OF JAPAN MARINE PRODUCTS IMPORTERS ASSOCIATION

Firm Name and Location	Products
ALASKA BOEKI CO., LTD. 4-1, 3-chome Marunouchi, Chiyoda-ku, Tokyo 100 Phone. (03) 212-2611 Cable. ALAPUL TOKYO Telex. J22417	Salmon, Salmon Roe, Herring Roe, other Fish Roe.
C. ITOH & CO., LTD. Marine Products Department 2-4, Nihonbashi-Honcho, Chuo-ku, Tokyo 103 Phone. (03) 242-2918 Cable. "CITOH TOKYO" Telex. ITOCEU J22295	Tuna, Eel, Shrimp, Octopus, Crab
CO-OPTRADE JAPAN LTD. (Export & Import Organ. of Japanese Consumer's Co-operative Union) Seikyo Kaikan, 1-13, 4-chome Sendagaya, Shibuya-ku, Tokyo 151 Phone. (03) 404-3251 Cable. COOPTRADE TOKYO Telex. J23393 COOPTR	Frozen Herring, Herring Roe, Salmon Roe, Capeline
DAIKO LTD. 1-2, 2-chome Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 543-1989 Cable. ALLDAISEIKO TOKYO Telex. DAIKONO J-25505	Shrimp, Tuna, Fish Roe, Shark Fin
DAIMARU KOGYO KAISHA, LTD. Tokyo Office 10-9, 2-chome Ginza, Chuo-ku, Tokyo 104 Phone. (03) 544-9123 Cable. DAIMARUKO TOKYO Telex. J24395	Salmon, Herring Roe, Crab, Shrimp, Salmon Roe
EASTERN PRODUCTS CO., LTD. Marine Products Department Tokyo-Kaijo-Bldg., 2-1, 1-chome, Marunouchi, Chiyoda-ku, Tokyo 100 Phone. (03) 212-7861 Cable. EASTERNPRO TOKYO Telex. J26285 EPCTOBU	Frozen Shrimp, Cuttlefish, Octopus, etc.

Firm Name and Location	Products
EBINO DAIMARU CO., LTD. 21-7, 6-chome Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 541-7281 Cable. EBNOGAIMARU Telex. 252-3826	Shrimp and allied products
FUSO TRADING CO., LTD. Naka Bldg., 14-17, 2-chome Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 541-5581 Cable. BACKBONE TOKYO Telex. J28650 BACKBONE	Shrimp, Salmon, Cuttlefish, Snow Crabs, Abalone, and other fish
HANWA CO., LTD., TOKYO BRANCH 13-10, 1-chome Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 544-2317, 2342, 2350 Cable. HANWASAMA TOKYO Telex. (252) 2342-2358	Shrimp, Salmon, Salmon Roe, Herring Roe, Shell fish
HOKO FISHING CO., LTD. 2-4, 1-chome Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 542-5411 Cable. "HK SUISAN TOKYO Telex. 0252-2933 TOK, 0252-3337	Shrimp, Cuttlefish, Sillago, Octopus, Salmon Roe, etc.
HOHMEI CO., LTD. 3-8, 4-chome Tsukihi, Chuo-ku, Tokyo 104 Phone. (03) 543-6431 Cable. ABSEAHOHMEI Telex. 252 4579 HOHMEI J	Frozen Prawns, fresh and alive Fish (Hamo Itoyori Tachiuo, etc.) Fresh and alive Lobster, Dried Salted Flying Fish Eggs
HOEI TRADING CO., LTD. Marine Product Department 9F Mitsuiseimei Bldg., 2-3, 1-chome, Ote-machi, Chiyoda-ku, Tokyo 100 Phone. (03) 214-3981 Cable. HOEIGHCOM TOKYO Telex. 222 4193 FUOILC J	Salmon, Salmon Roe, Herring, Herring Roe, Fish, n.e.s.
INTERNATIONAL MARINE PRODUCTS CO. 1-17, 4-chome Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 542-5241 Cable. IMPCO TOKYO Telex. J23384 IMPCOTOK	Fish and Shell Fish (Frozen)

Firm Name and Location	Products
ITOMAN & CO., LTD. Mori Bldg., No. 20 7-4, Nishishinbashi 2-chome, Minato-ku, Tokyo 105 Phone. (03) 504-8130 Cable. ITOMAN TOKYO Telex. J22810	Shrimp (Prawn), Lobster, Squid (Cuttlefish), Snapper, Abalone and other seafoods
ITO-YOKADO CO., LTD. Overseas Department 5 Sanban-cho chiyoda-ku, Tokyo Phone. (03) 264-2111 Cable. YORKSHOP TOKYO Telex. J23841	
KAIKO INC. 6F Naka Bldg., 14-17, 2-chome Tsukiji Chuo-ku, Tokyo 104 Phone. (03) 542-6301 - 3 Cable. KAIKOINC TOKYO Telex. 252-4659 KAINC J	Marine Products
KANEMATSU-GOSEO LTD. Foodstuff Department No. IV 2-5, Takaracho, Chuo-ku, Tokyo 104 Phone. (03) 562-7028 Cable. KANEFOLD TOKYO Telex. 252-2991	Shrimp, Octopus, Salmon Roe, Cuttlefish/Squid, Herring Roe, etc.
KASHO COMPANY, LTD. Marine Products Section 14-9, 2-chome Nihonbashi, Chuo-ku, Tokyo 103 Phone. (03) 272-5011 Cable. GOMUKASHO TOKYO KASHOCOY TOKYO Telex. 222-2393, 222-3886, 222-3887	Shrimp, Herring Roe, Salmon, Cuttlefish, Octopus
KOBE YOKO, LTD. 9th Floor K.I.M.M. Bldg., 4-2-8 Isobe-Dori, Fukiai-ku, Kobe 651 Phone. (078) 232-3621, 3721, 3821, 3921 Cable. KOBEYOKO KOBE Telex. J78838 KOBEYOKO	Frozen Prawns/Shrimps, Lobsters, Cuttlefish, Abalone, Salmon, Scallops, Fish and Salted Herring Roe

Firm Name and Location	Products
KYOKUYO CO., LTD. Trading Department 1-1, 2-chome Marunouchi, Chiyoda-ku, Tokyo 100 Phone. (03) 211-5461 Cable. CHIYODAKYOKUYO Telex. 222-2493 (KYOKUA J)	Shrimp,(Lobster), Salmon Roe, Herring Roe, Crab, Cuttlefish
MARUBENI COLDSTORAGE CO., LTD. 13-22, 4-chome Shibaura, Minato-ku, Tokyo 108 Phone. (03) 451-9301 Cable. TOKYO MINATO BENIREI Telex. 242-4602 (BENIREI J)	Tuna, Black Cod, Red Snapper
MARUBENI CORPORATION Marine Products Department 4-2, 1-chome Ohtemachi, Chiyoda-ku, Tokyo 100 Phone. (03) 282-4750 Cable. MARUBENI TOKYO Telex. J22326/8	Tuna, Herring Roe, Salmon Roe, Shrimp, Octopus, Cuttlefish, etc.
MEIWA TRADING CO., LTD. 3-1, 3-chome Marunouchi, Chiyoda-ku, Tokyo 100 Phone. (03) 212-8651 Cable. MEIWA TOKYO Telex. J22336, J26746	Shrimp, Cuttlefish, Herring Roe, Flying Fish Eggs and Jellyfish
MITSUBISHI CORPORATION Marine Products Department 3-1, 2-chome Marunouchi, Chiyoda-ku, Tokyo 100 Phone. (03) 210-6700 Cable. MITSUBISHICORP TOKYO Telex. J22222-5, 222-2071/222-6333	Tuna, Cuttlefish, Octopus, Shrimp, Herring Roe, etc.
MITUI & CO., LTD. Second Provisions Divisions 2-1, 1-chome Ohtemachi, Chiyoda-ku, Tokyo 100 Phone. (03) 285-5968 Cable. MITSUI TOKYO Telex. 222-2001	Frozen Shrimp, Frozen Tuna, Frozen Octopus, Salmon Roe, Frozen Sepia, Frozen Herring Roe, etc.
NAKAMURA SUISAN CO., LTD. 3-15, 3-chome Kaigan, Minato-ku, Tokyo 108 Phone. (03) 452-3756 Telex. 242-2503 NAKAUO J	Salmon, Salmon Roe, Herring, Herring Roe, Fluing Fish, Mullet, Cuttlefish

Firm Name and Location	Products
NEMURO SUISAN CO., LTD. 7-18, 5-chome Chuo, Nakano-ku, Tokyo 104 Phone. (03) 381-2715	Frozen Salmon, Frozen Crab, Salted Salmon Roe, Salted Herring Roe
NICHIMEN CO., LTD. Marine Products Section 1-6, Takaracho, Chuo-ku, Tokyo 104 Phone. (03) 566-2289, 2295 Cable. TYNICHIMEN TOKYO Telex. J22620	Shrimp, Tuna, Skipjack, Salmon, Herring Roe and general Marine products
NICHIMO CO., LTD. Foreign Trade Department Nippon Bldg., 6-2, 2-chome Ohtemachi, Chiyoda-ku, Tokyo 100 Phone. (03) 245-4937 Cable. NICHIMOCOMPANY TOKYO Telex. 222-2552, 222-6874 NITIMO	Salmon, Tuna, Salmon Roe, Herring Roe, Black Cod, Cuttlefish, Shrimp, and Prawn, Caviar, Red Snapper, canned Seafoods, canned Vegetable and general fish, etc.
NICHIRO GYOGYO KAISHA, LTD. (Nichiro Fisheries Co., Ltd.) Foreign Trade Department 12-1, 1-chome Yuraku-cho, Chiyoda-ku, Tokyo 100 Phone. (03) 214-6161 Cable. NICHIROGYO TOKYO Telex. 222-3661 NICHIR J	Shrimp, Prawn, Lobster, Tuna, Octopus, Squid, Herring Roe, Salmon Roe, Salmon, Trout, Whale Meat, etc.
NIKKO TRADING CO., LTD. 1-7-1, Haneda Airport; Ota-ku, Tokyo 144 Phone. (03) 747-6351 Cable. NIPPONAIRTRADE Telex. 246-6231 NTCTYO J	Foodstuffs
NIPPON REIZO KABUSHIKI KAISHA Foreign Trade Division 5-7, 3-chome Minato, Chuo-ku, Tokyo 104 Phone. (03) 551-2101 Cable. NICHIREI TOKYO Telex. J22450, J25340	Shrimp, Abalone, Cuttlefish, School Whiting, Octopus, etc.
NIPPON SUISAN KAISHA, LTD. (Nippon Fishery Co., Ltd.) 6-2, 2-chome Ohtemachi, Chiyoda-ku, Tokyo 100 Phone. (03) 244-7000 Cable. NUSSUI TOKYO Telex. 222-2260, 2271, 2277	Shrimp, Octopus, Cuttlefish, Tuna, Salmon Roe

Firm Name and Location	Products
NICHIRYO, LTD. 2-1, 2-chome Azabudai, Minato-ku, Tokyo 106 Phone. (03) 584-0151 Cable. FEEDSTUFF Telex. 242-2136 NICRYO	Cuttlefish or Squid, Shrimp, Herring Roe, Clam, Mackerel-Pike, etc.
NISSHO-IWAI CO., LTD. Marine Products Section Nissho-Iwai Bldg., 4-5, 2-chome Akasaka, Minato-ku, Tokyo 107 Phone. (03) 588-2111 Cable. NISSHOIWAI TOKYO Telex. J22233	Prawn, Tuna, Octopus, Cuttlefish, Melurusa
NOMURA TRADING CO., LTD. TOKYO BRANCH Tokyo Animal & Marine Products Dept. Shin-Yaesuguchi Bldg., 2-2-1, Yaesu, Chuo-ku, Tokyo 104 Phone. (03) 277-4765-4775 Cable. NOMURABO Telex. J22396, J22964	Shrimp, Tuna, Fish Roe, Cuttlefish, Octopus, and others
NORTH BORNEO FISHING CO., (JAPAN) LTD. Tanaka-Yaesu Bldg., 5-15, 1-chome Yaesu, Chuo-ku, Tokyo 103 Phone. (03) 273-5746/8 Cable. BORNSHRIMP Telex. 222-6364 SUEDA J	Shrimps, Frozen
NOZAKI & CO., LTD. Farm & Sea Products Department 16-19, 7-chome Ginza, Chuo-ku, Tokyo 104 Phone. (03) 542-9211 Cable. NOZAKI TOKYO Telex. J22375	Cuttlefish, Octopus, Herring Roe, Salmon Roe, Capelin, Salmon, Herring, Shrimp, Crab
OKURA & CO., LTD. Hide, Livestock & Marine Products Department 3-6, 2-chome Ginza, Chuo-ku, Tokyo 104 Phone. (03) 563-6051 Cable. IKURA TOKYO Telex. J-22306	Shrimp, Cuttlefish, Salmon, Herring Roe, Salmon Roe, etc.

Firm Name and Location	Products
OSAKA GODO CO., LTD. TOKYO BRANCH Foreign Trade Section 6-4, 2-chome Nihonbashi-Honcho, Chuo-ku, Tokyo 103 Phone. (03) 665-8415 Cable. KUHOJIMURA TOKYO, OSAKA GODO TOKYO Telex. 252-2212 (OG TB J) 252-4377 (OG TB J)	Frozen Shrimp
OVERSEA FISHERY DEVELOPMENT LTD. Charm Hamamatsucho, 2-5, 1-chome Kaigan, Minato-ku, Tokyo 105 Phone. (03) 431-9589 Cable. ASSISTANTENTER Telex. 2423729 ASSIST J	Shrimp, Octopus, Cuttlefish
SAIKI SHOJI CO., LTD. Hibiya Park Bldg., 8-1, 1-chome Yuraku-cho, Chiyoda-ku, Tokyo 100 Phone. (03) 271-9636 Cable. CANSAIKI Telex. CANSAIKI J26123	Shrimp, Abalone, Salmon, Herring Roe, other fish
SHIBAMOTO & CO., LTD. Import Section 1-12, 1-chome Minato, Chuo-ku, Tokyo 104 Phone. (03) 553-1111, 552-4231 Cable SIBASTECO TOKYO Telex. J22512 SIBAMOTO TOKYO	Shrimp, Cuttlefish, Octopus, Salmon, and Herring Roe
SUMITOMO SHOJI KAISHA, LTD. Marine Products Section No. 2 Nishikicho Bldg., 24-1, 3-chome Kandanishiki-cho, Chiyoda-ku, Tokyo 100 Phone. (03) 296-3853/61 Cable. SUMITSHOJI TOKYO Telex. J22202, J22203, SUMITOMO J22202	Frozen Shrimp, Herring Roe, Salmon Roe, Tuna
TAIYO GYOGYO KABUSHIKI KAISHA (Taiyo Fishery Co., Ltd.) Foreign Trade Department New Marunouchi Bldg., 5-1, 1-chome Marunouchi, Chiyoda-ku, Tokyo 100 Phone. (03) 216-0811 Cable. OCEANFISH TOKYO Telex. J22278, J24335, J26846	Shrimp, Tuna, Salmon, Crab, Cuttlefish, Octopus, Herring Roe, Salmon Roe, etc.

Firm Name and Location	Products
TAKAEI TRADING CO., LTD. 22-4, 6-chome, Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 542-4791 Cable. TAKAEISHOTEN Telex. 252-3736	Tuna, Salmon, Red Snapper and other frozen fish
TOKYO COMMERCIAL CO., LTD. Import Section Playguide Bldg., 6-4, 2-chome Ginza, Chuo-ku, Tokyo 104 Phone. (03) 562-2541 Cable. TOCOMCO TOKYO Telex. 252-2432	Frozen Tuna and Tunalike Fish, Shrimp, Prawn and Lobster, Cuttlefish, Octopus, Abalone
TOKYO MARUICHI SHOJI CO., LTD. 16-9, 2-chome Uchikanda, Chiyoda-ku, Tokyo 101 Phone. (03) 256-1111 Cable. MARUICHISHOJI TOKYO Telex. J22427	Frozen Prawn, Frozen Cuttlefish, Octopus and other frozen fishes and Salted Herring Roe, Salted Salmon Roe and other Salted or Dried fish or fish products
TOSHOKU, LTD. Marine Products Department 2-4, Muromachi, Nihonbashi, Chuo-ku, Tokyo 103 Phone. (03) 244-2469, 2472 Cable. TOSEOKU LTD. TOKYO Telex. 2223311-2223315	Frozen Tuna, Shrimp, Salmon, Octopus, Cuttlefish
TOYO MENKA KAISHA, LTD. Marine Products Department Iino Bldg., 1-1, 2-chome Uchisaiwai-cho, Chiyoda-ku, Tokyo 100 Phone. (03) 506-3462, 3411, 3391 Cable. TOYOMENKA TOKYO Telex. J22421, J22548, J22332	Shrimp, Cuttlefish, Octopus, Herring Roe, Salmon Roe, etc.
TOYO SUISAN KAISHA, LTD. Fish Business Department 13-40, 2-chome Kohnan, Minato-ku, Tokyo 108 Phone. (03) 471-5127 Cable. MARUTOFISH TOKYO Telex. J28606, (242) 2301	Salmon Roe, Herring Roe, Tanner Crab, Shrimp, Eel, Wakame, Bottom fish, Salmon
TOYODA TSUSHO KAISHA, LTD. Foodstuff Section 5-7, Yaesu, Chuo-ku, Tokyo 104 Phone. (03) 277-2765 Cable, Toyoda Tsusho, TOYOSAN TOKYO Telex. J22827	Shrimp, Frozen Squidfish, Living Akagai, Living Crab, Seasoned Cuttlefish

Firm Name and Location	Products
WAKO TRADING CORPORATION Dai-ichi Bldg., 10-4, 2-chome Nihonbashi, Chuo-ku, Tokyo 103 Phone. (03) 271-5421 Cable. YAOHANGROUP Telex. 2226978 YAOHAN J	Frozen Shrimp, Salmon, Salmon Roe, Herring Roe
K.K. WASHINGTON FISH (Washington Fish, Inc.) Ikeda Bldg., 5-5, 4-chome Tsukiji, Chuo-ku, Tokyo 104 Phone. (03) 542-9301 Cable. WAFIOYCO Telex. J24234	Shrimp, Tuna, Salmon Roe, Squid, other fish
WILBUR-ELLIS CO., (JAPAN) LTD. Foodstuff Department Sanshin Bldg., 4-1, 1-chome Yuraku-cho, Chiyado-ku, Tokyo 100 Phone. (03) 591-3221 Cable. WILBURELL TOKYO Telex. J22257 WECO	Lobster, Shrimp, Fishes
YOKOHAMA REITO K.K. 1-7, 1-chome Moriya-cho, Kanagewa-ku, Yokohama 221 Phone. (045) 461-6431 Telex. 3822-219	Shrimp, Cuttlefish, Sillago, Shellfish
YUASA TRADING CO., LTD. No. 25 Kowa Bldg., 8-7, Sanban-cho, Chiyoda-ku, Tokyo 102 Phone. (03) 265-4411 Cable. YUASA TOKYO Telex. J22401	Shrimp, Octopus, Cuttlefish