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Inspection Results of Imported Foods Monitoring and Guidance Plan for FY 2009

Interim Report

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Department of Food Safety
Pharmaceutical and Food Safety Bureau
Ministry of Health, Labour and Welfare

Inspection Results of Imported Foods Monitoring and Guidance Plan for FY 2009 (An Interim report)

1. Introduction

In order to monitor and provide instructions to ensure the safety of foods, etc., imported into Japan (hereafter referred to as “imported foods, etc.”), the government established the imported food monitoring and instruction program in 2009 (hereinafter, “the program”). The program is based on the guidelines for monitoring and providing instructions in food sanitation (Ministry of Health, Labour and Welfare Notification No. 301, 2003) as per the regulations of Article 23, Paragraph 1 of the Food Sanitation Act (Act No. 233, 1947; hereinafter, “the Act”); public comments were collected and risk communication was conducted. The program was published in the Official Gazette as an official report according to the regulations of Paragraph 3 of the same article, and the monitoring and instruction for imported foods, etc., is being conducted based upon the Program.

The Ministry of Health, Labour and Welfare will publish an outline of the implementation status of the monitoring and instruction for imported foods, etc., conducted in accordance with the program, by June of the next year and will also publish the mid-year status around the middle of the fiscal year. The Ministry has prepared an interim report on the results of inspections that were based on the program from April to September 2009.

Reference: Website on “Safety of Imported Food”

http://www.mhlw.go.jp/topics/yunyu/tp0130-1.html

Inquiry: Office of Import Food Safety, Inspection and Safety Division, Department of Food Safety

2. Overview of the Imported Foods Monitoring and Guidance Plan for FY 2009

(1) What is the Imported Foods Monitoring and Guidance Plan?

The *Imported Foods Monitoring and Guidance Plan* is a plan for the implementation of monitoring and guidance conducted by the national government with respect to imported foods (Article 23, paragraph 1 of the Act).

[Objective] To ensure greater safety of imported foods by promoting the national government to conduct inspections at the time of importation and to conduct monitoring of and guidance for importers in an intensive, effective and efficient manner.

(2) Principles for Monitoring and Guidance on Imported Foods

Based on Article 4 of the Food and Safety Basic Act (Act No.48 of 2003) (that is, food safety shall be ensured by taking appropriate measures at each stage of the domestic and overseas food supply process), the Plan is prepared in order that three stages of sanitation measures are taken, namely, in the exporting country, at the time of importation, and at the time of domestic distribution.

(3) Priority Items for Monitoring and Guidance

- ○ Confirmation of whether violations of the Act exist at the time of import declaration
- ○ Monitoring[*1] (Plan for 2009: about 83,000 items across 157 food groups)
- ○ Inspection orders[*2] (as of September 30, 2009:16 items from all exporting countries and 201 items from 38 countries and 1 region)
- ○ Regulations for comprehensive import bans[*3]
- ○ Emergency responses based on overseas information, etc.

(4) Promotion of Sanitation Measures in Exporting Countries

- ○ Requests to the governments of exporting countries for the establishment of sanitation control measures.
- ○ Strengthening of control and monitoring systems for agricultural chemicals, etc., and the promotion of pre-export inspections, through on-site inspections and bilateral talks

(5) Guidance for Importers on Voluntary Sanitation Control

- ○ Pre-import guidance (so-called “import consulting”)
- ○ Guidance for voluntary inspections at initial importation and on a regular basis
- ○ Instructions on the keeping of records
- ○ Dissemination of knowledge on food sanitation to importers, etc.

*1: Systematic inspections based on statistical concepts that take into account the volume of imports and violation rates, etc., for different food types.

*2: With regard to items having a high probability of being in violation of the Act, inspections are ordered by the Minister of Health, Labour and Welfare at each and every importation. Items are not permitted to be imported or distributed unless they pass that inspection.

*3: Regulations by which the Minister of Health, Labour and Welfare can prevent the sale or import of specified foods, without the need for inspections, in cases where it is deemed necessary from the perspective of preventing harm to public health.

3. Results of Monitoring and Guidance Based on the Imported Foods' Monitoring and Guidance Plan for FY 2009 (Interim report)

Looking at the declarations, inspections and violations made from April through September of 2009 (Table 1), there were 903,873 [887,703] declarations, and the weight of declared items, based on a preliminary report, was 11,791 million tons [12,046 million tons].

Inspections were carried out on 108,390 items (there were inspection orders on 54,221 items, monitoring on 24,200 items, and voluntary inspections on 29,969 items [91,955 items (inspection orders on 44,596 items, monitoring on 26,682 items, and voluntary inspections on 21,077 items)]). Of these, 660 cases [501 cases] were found to be in violation of the Act, and steps were taken for their re-shipment, disposal, etc.

Records of violations categorized by Article (Table 2) show that violations of Article 11 of the Act, which is related to microbiological criteria for food, standards on residual agricultural chemicals and standards for the use of additives, were most common in 384 instances, followed by violations of Article 6, which is related to contamination with hazardous or toxic substances such as aflatoxin, in 213 instances, violations of Article 18, which is related to standards for apparatus or containers and packaging, in 43 instances, and violations of Article 18 (applied mutatis mutandis to Article 62) of the Act, which is related to standards for toys, in 33 instances. Compared with the same period of the previous year, violations of Article 18, which is applied mutatis mutandis under Articles 6, 18 and 62, increased drastically. The increase in violations of Article 6 was due to stricter guidance for submitting of accident reports following defective rice problems. The increase in violations of Article 18 was attributed to a rise in violations of imports of apparatus in small amounts, seemingly for examination purposes, and the increase in violations of Article 18 applied mutatis mutandis to Article 62 was due to the expansion of the scope of toys subject to control.

Records of monitoring in FY 2009 (Table 3) show that, out of a total of 83,400 planned inspections, 46,870 were actually conducted. (That's an implementation rate of about 56%.) Of these, recalls were made based on a total of 80 violations of the Food Sanitation Act.

As of September 30, 2009, inspection orders had been applied to 16 products from all exporting countries and 201 products from 38 countries and 1 region. The record of inspection orders (Table 6) shows that a total of 99,117 inspection orders were conducted and, of these, steps were taken for their re-shipment or disposal, etc. based on 177 violations of the Act.

Based on information from overseas on such topics as food-poisoning occurrences and recalls of law-violating food products, the system for monitoring items for importation was enhanced; and domestic distribution was examined in FY 2009 for issues such as Salmonella-contaminated pistachio from the United States, crystal-violet-contaminated cultured salmon and trout from Canada and enterohemorrhagic Escherichia coli 0103 in raw goat cheese from France (Table 7).

Figures in brackets are for the same period in the previous year.

Table 1 Notification, Inspection and Violation Statuses (April-September 2009: Tentative Report)

No. of Notifications	Amount of import	No. of inspections[*1]	Percentage[*2]	No. of violations	Percentage[*2]
Cases	1,000 tons	Cases	%	Cases	%
903,873	11,791	108,390 (54,221)[*3]	12.0	660	0.07
(Records of the previous FY)					
887,703	12,046	91,955	10.4	501	0.06

*1 Values obtained after excluding overlapping cases from the total values of monitoring inspection, inspection order, instructive inspection, etc.

*2 Percentage of the number of inspections to the number of notifications

*3 Figures related to inspection orders (repeated elsewhere)

Table 2 Major Violation Cases (April–September 2009: Tentative Report)

Violated article	Number of violations	Component percentage	Major violations
	Cases	%	
Article 6 (Distribution of prohibited foods and additives)	213	30.6	Aflatoxin-contaminated corn, pearl-barley, peanut, almond, sesame, etc.; cyanide-contaminated cassava; Listeria monocytogenes-contaminated meat products; detection of diarrhetic shellfish toxin; and decay, deterioration and fungus formation due to accidents during the transport of rice, wheat and cacao beans, etc.
Article 9 (Limitation on distribution, etc. Of diseased meat, etc)	1	0.1	No hygiene certificate attached
Article 10 (Limitation ondistribution, etc. of additives, etc.)	23	3.3	Processed foods that contain additives such as cyclamate, tertiary butylhydroquinone (TBHQ), orange II, azorubin, melamine, or any other additives not designated for use as additives
Article 11 (Standards and specifications for foods or additives)	384	55.1	Violation of specifications for vegetable and dried vegetable (violation of standards for residual pesticides); violation of specifications for seafood and its processed products (inclusion of antibacterial substances, and violation of standards for residual pesticides); violation of specifications for frozen foods (viable cell count, Escherichia coli and coliform bacilli); violation of standards for usage of additives (sorbic acid, benzoic acid, etc); excessive amount of residual additives(sulfur dioxide, etc.)
Article 18 (Standards and specifications for instruments and containers/packages)	43	6.2	Violation of specifications/standards for instruments and containers/packages; violation of specifications for each raw material
Article 18 applied mutatis mutandis to Article 62 (Mutatis mutandis application to toys, etc.)	33	4.7	Violation of specifications for toys or their raw materials
Total	697 (total number)[*1] 660 (number of notifies violations)[*2]		

*1: Total number of item-by-item inspection

*2: Number of notifications for which inspection was carried out.

Table 3 Implementation Status of Monitoring Inspection (April–September 2009: Tentative Report)

Food Group	Category of inspection items[*1]	Number of programs planned in the FY[*2]	Number of programs implemented	Number of violations
Livestock foods Beef, pork, chicken, horse meat, poultry meat, and other meats	Antibacterial substances, etc.	2,150	1,205	0
	Residual agricultural chemicals	1,900	1,174	0
	Standards for constituents	700	408	0
Processed livestock foods Natural cheeses, processed meat products, ice cream, frozen products (meat products), and other products	Antibacterial substances, etc.	2,700	1,008	1
	Residual agricultural chemicals	1,050	699	0
	Additives	1,300	910	0
	Standards for constituents	2,050	934	1
Seafood products Bivalves, fish, shellfish (shrimps, prawns, crabs) and other products	Antibacterial substances, etc.	2,300	1,277	2
	Residual agricultural chemicals	2,100	1,371	0
	Additives	250	211	0
	Standards for constituents	600	524	0
Processed seafood Processed fish products (fillet, dried or minced fish, etc.), processed fish roe products, and other products	Antibacterial substances, etc.	4,350	2,490	1
	Residual agricultural chemicals	2,250	2,154	0
	Additives	1,850	1,666	0
	Standards for constituents	3,650	2,293	14
Agricultural foods Vegetables, fruit, wheat, barley, corn, beans, peanuts, nuts, seeds, and other products	Antibacterial substances, etc.	700	677	0
	Residual agricultural chemicals	14,500	7,955	30
	Additives	850	371	0
	Standards for constituents	1,000	673	0
	Mycotoxins	2,950	1,723	1
	GMOs	700	610	0
Processed agricultural foods Frozen products processed vegetables), processed vegetable products, processed fruit products, spices, instant noodles, and other products	Antibacterial substances, etc.	100	105	0
	Residual agricultural chemicals	9,150	3,981	9
	Additives	4,300	2,630	1
	Standards for constituents	2,650	1,243	1
	Mycotoxins	1,800	775	1
	GMOs	300	68	0
	Exposure to radiation	600	181	3
Other foods Health foods, soups, flavorings, seasonings, sweets, edible oils, fat, frozen products, and other products	Residual agricultural chemicals	200	200	0
	Additives	2,850	1,413	0
	Standards for constituents	700	236	0
	Mycotoxins	700	385	0
Drinks and beverages Mineral water, soft drinks, alcoholic beverages, and other products	Residual agricultural chemicals	400	240	0
	Additives	850	687	0
	Standards for constituents	1,000	433	0
	Mycotoxins	100	38	0
Additives, equipment, containers and packages Toys	Standards for constituents, etc.	2,800	582	0
Foods subject to reinforced monitoring inspection	Confirmation of removal of SRM, antibacterial substances, etc., exposure to radiation, additives	5,000	3,340	15
Total (number)		83,400	46,870 Rate of programs implemented to planned= ~56%	80

*1: Examples of tested substances

- Antibacterial substances, etc.: antibiotics, synthetic antimicrobials, hormone drugs, feed additives, etc.
- Residual agricultural chemicals: organophosphorous, organochlorine, carbamates, pyrethroid, etc.
- Additives: sorbic acid, benzoic acid, sulfur dioxide, coloring agents, polysorbate, cyclamic acid, TBHQ, antimold agents, etc.
- Standards for constituents, etc.: Items stipulated in the compositional standards (bacteria count, coliform bacteria, *Vibrio parahaemolyticus*, etc.), pathogenic microorganisms (enterohemorrhagic *E. coli* O157, *listeria monocytogenes*, etc.), shellfish poisons (diarrhetic shellfish poison, paralytic shellfish poison), fungicide for disposable wooden chopsticks, etc.
- Mycotoxin: aflatoxin, deoxynivalenol, patulin, etc.
- Genetically modified organs (GMOs): genetically modified foods, etc. that have not been assessed for safety.

*2: Rough estimate of the number of item-by-item inspections of antibacterial substances, agricultural chemicals, etc.

Table 4 Items Subject to Reinforcement of Monitoring Inspection[*1] (April–September 2009[*2])

Countries/Regions	Subject foods	Test items
China	Edamame (green soybeans)	Propham
	Perilla	Hexaflumuron
	Honey	Chloramphenicol
	Lychee	Methamidophos, 4-CPA
	Small peanuts	Daminozide
	Wasabi	Phoxim
	Potatoes	Aldicarb sulfoxide
	Spinach	Chlorfenapyr
	Asparagus	Isocarbophos
	Chinese mitten crab	Furazolidone
Thailand	Mangoes	Pirimiphos-methyl
	Holy basil	Chlorpyrifos
	Indian spinach	Ethiprole
	Asparagus	Diuron
South Korea	Green chili	Flonicamid
	Chili peppers	Hexaconazole
	Rice	Hexaconazole
	Sea urchins for raw consumption	*Vibrio parahaemolyticus*[*3]
	Arch shells for raw consumption	*Vibrio parahaemolyticus*[*3]
	Tairagigai (*Atrina pectinata*) for raw consumption	*Vibrio parahaemolyticus*[*4]
India	Fermented tea	Hexaconazole
	Sesame seeds	Parathion-methyl
	Cumin seeds	Iprobenfos
Vietnam	Edamame (green soybeans)	Lufenuron
	Immature beans	Acephate
U.S.	Broccoli	Flonicamid
	Raspberry	Bifenazate
Myanmar	Sesame seeds	Imidacloprid, carbaryl
Ghana	Cacao beans	Imidacloprid, fenitrothion
Philippines	Sea urchins for raw consumption	*Vibrio parahaemolyticus*[*3]
France	Turnip roots	Difenoconazole
Canada	Cultured salmon/trout	Crystal violet[*5]
Sri Lanka	Chili peppers	Triazophos
Iran	Cumin seeds	Profenofos
Dominican Republic	Mangoes	Cyproconazole
Mexico	Avocado	Acephate
Indonesia	Edamame (green soybeans)	Chlorfenapyr
Taiwan	Bananas	Dinotefuran
Honduras	Sesame seeds	Triazophos
Poland	Red currants	Flusilazole
New Zealand	Beetroot	Difenoconazole
Exporting countries excluding India, Indonesia and Myanmar	Turmeric	Aflatoxin

*1 Enhanced monitoring inspections, which are to be implemented after a violation has been detected, were conducted on 30% of all import declarations. However, if no similar violations were detected in more than 60 enhanced monitoring inspections, the items in question were subjected to the normal inspection system.

*2 Excludes items included in Table 5.

*3 As a step to reinforce inspections during the summer period, all (100%) import declarations were inspected (Jun-Oct 2009).

*4 As a step to reinforce inspections during the summer period, 30% of import declarations were inspected (Jun-Oct 2009).

*5 An example of the new monitoring inspection implemented based on information from abroad.

Table 5 Items Shifted to Inspection Order (April–September, 2009)

Countries/Regions	Subject foods	Test items
China	Agricultural products (spices, vegetables, fruits, tea, etc.) and seafood products (mantis shrimp) (limited to manufacturers)	Exposure to radiation
	Green peppers (including paprika)	Difenoconazole
	Pork and pork processed products	Clenbuterol
	Japanese leeks (including wakegi green onion)	Aldicarb sulfoxide
	Lychee	Imazalil
	Matsutake mushrooms	Chlorpyrifos
India	Black tea (limited to manufacturers)	Hexaconazole
	Cumin seeds	Profenofos
U.S.	Agricultural products (spices, vegetables, fruits, tea, etc.) and seafood products (mantis shrimp) (limited to manufacturers)	Exposure to radiation
South Korea	Paprika (bell peppers) (limited to exporters)	Flonicamid
Sudan	Sesame seeds	Carbaryl
Brazil	Fresh coffee beans	Pyraclostrobin
France	Soft and semi-soft type natural cheese (limited to manufacturers)	Enterohemorrhagic *Escherichia coli* O103
Peru	Quinoas	Methamidophos
Thailand	Lemongrass	EPN
Australia	Cotton seeds	Aflatoxin
Myanmar	Turmeric	Aflatoxin

Table 6 Items Subject to Inspection Order and Inspection Results (April–September 2009: Tentative Report)

Countries/ Regions	Main subject foods	Main test items	Number of tests*	Number of violations
All exporting countries (16 items)	Peanuts, nuts, chili peppers,etc.	Aflatoxin	3,749	21
	Beans containing cyanide, cassava	Cyanide compounds	201	1
	Salted salmon roe	Nitrite	456	3
	Pufferfish	Differentiation of fish species	1	0
China (49 items)	Chicken, pork, shrimps, eels, etc.	Nitrofurans, tetracylines antibiotics, clenbuterol, malachite green, etc	30,391	17
	Fruit and vegetables, beans, fish (shiitake mushrooms, weather loaches, etc.)	Fenpropathrin, tebufenozide, methamidophos, pyrimethanil, etc.	17,233	15
	Clams	Paralytic shellfish toxin, diarrhetic shellfish toxin	2,976	2
	Processed eel products, etc.	Bacteria count, coliform bacteria	1,238	0
	Milk, dairy products, and processed foods containing those as an ingredient	Melamine	4,922	1
	Processed foods, etc.	Cyclamic acid	373	0
Thailand (27 items)	Cultured shrimps	Oxolinic acid	597	0
	Fruit and vegetables (okra, mangoes, bananas, etc.)	EPN, chlorpyrifos, cypermethrin, etc.	1,253	2
	Basil seeds	Aflatoxin	1	0
South Korea (21 items)	Constricted tagelus, freshwater clams	Endosulfan	103	4
	Vegetables (paprika, chili peppers, perilla (*perilla frutescens var. japonica*), etc.)	Ethoprophos, chlorpyrifos, bifenthrin, etc.	173	1
	Clams	Paralytic shellfish toxin, diarrhetic shellfish toxin	313	0
	Tairagigai (*Atrina pectinata*) for raw consumption	*Vibrio parahaemolyticus*	1	0
Taiwan (15 items)	Eels, royal jelly, soft-shelled turtles	Chloramphenicol, nitrofurans etc.	3,105	4
	Vegetables, fruit, tea	Bromopropylate, chlorpyrifos, cyfluthrin, etc.	322	3
	Processed foods, etc.	Cyclamic acid, carbon monoxide	20	0
U.S. (14 items)	Corn, almond, etc.	Aflatoxin	2,040	19
	Vegetables, cereals (parsley, celery, etc.)	Chlorpyrifos, boscalid, etc.	330	2
Vietnam (8 items)	Shrimps, cuttlefish, cultured eels	Chloramphenicol, nitrofurans etc.	14,487	15
	Spinach	Indoxacarb	38	0
	Sesame seeds, etc.	Aflatoxin	13	0
	Fishery food products	*Shigella*	10	0
	Processed foods, etc.	Cyclamic acid	51	0
Others (33 countries, total 68 items)			14,720	67
Total			99,117	177

* Total number of item-by-item inspections

Table 7 Major Cases in Which Monitoring Was Reinforced Based on Information From Overseas (April–September 2009)

Month of reinforcement	Country	Food and contents	Background and monitoring status
April	U.S.	Pistachio (possibly contaminated with *Salmonella*)	Measures were taken to return shipments for each import notification of such products based on information regarding product recall in the U.S.
April	Canada	Cultured salmon/trout (possibly contaminated with crystal violet)	Monitoring inspection was strengthened in response to information that the Canadian government detected crystal violet during its monitoring inspection
April	Chile	Chicken and pork products (possibly contaminated with *Listeria*)	Measures were taken to return shipments for each import notification of such products based on information regarding product recall in the Chile.
June	Austria	Soft drinks (Possible violation of the Narcotics and Psychotropics Control Act)	Based on information that cocaine was detected in Austrian-made soft drinks in Germany, measures were taken to hold the cargo so that import notifications for the drinks could be made to customs houses and information could be reported to the relevant offices.
June	France	Raw goat cheese (possibly contaminated with enterohemorrhagic *Escherichia coli* O103)	Based on information that enterohemorrhagic *Escherichiacoli* O103 was detected in France and that the products in question were exported to Japan, measures were taken to hold the cargo of such products when import notifications are made.
June	Indonesia	Indonesian liquor (arrack) (possibly contaminated with methanol)	Based on information that cases of poisoning, including some deaths, were attributed to arrack, a Bali liquor containing methanol, measures were taken to provide guidance for voluntary inspections when import notification for arrack are made.
June	U.S.	Cookie dough (possibly contaminated with enterohemorrhagic *Escherichia coli* O157)	Measures were taken to return shipments for each import notification of such products based on information regarding product recall in the U.S.
June	U.S.	Beef (possibly contaminated with enterohemorrhagic *Escherichia coli* O157)	Measures were taken to return shipments for each import notification of such products based on information regarding product recall in the U.S.
September	Canada	Flax (possibly containing unauthorized recombinant flax)	Based on information that unauthorized recombinant flax produced in Canada is being distributed in Germany, measures were taken to hold cargo upon import notifications for Canadian-made flax.

(Reference) A description of Key Terms in the Interim Report

Term	Description
Sodium nitrite	Additive (color-fixing agent) whose maximum residual amounts as nitrite are defined
Acephate	Pesticide (organophosphorus insecticide)
Azorubin	Undesignated additive (coloring agent)
Aflatoxin	Fungal toxin (produced by the fungus *Aspergillus*, etc.)
Aldicarb	Pesticide (carbamate insecticide)
Aldicarb sulfoxide	Substance generated through chemical change of aldicarb
Benzoic acid	Additive (preservative)
Isocarbophos	Pesticide (organophosphorus insecticide)
Genetic modification	Technology such as fragmentation of bacterial genes, arrangement of the gene sequences or introducing the arranged genes into other organism's genes
Iprobenfos	Pesticide (organophosphorus fungicide)
Imazalil	Additive (antifungal agent)
Imidacloprid	Pesticide (chloronicotinyl insecticide)
Indoxacarb	Pesticide (oxadiazon insecticide)
Ethiprole	Pesticide (phenylpyrazol insecticide)
Ethoprophos	Pesticide (organophosphorus insecticide)
Endosulfan	Pesticide (organochlorine insecticide)
Oxolinic acid	Animal drug (synthetic antimicrobial (quinolone))
Orange II	Undesignated additive (coloring agent)
Carbaryl	Pesticide (carbamate insecticide)
Crystal violet	Fungicide (triphenylmethane dye)
Clenbuterol	Animal drug (uterine relaxant)
Chloramphenicol	Animal drug (antibiotic (chloramphenicol))
Chlorpyrifos	Pesticide (organophosphorus insecticide)
Chlorfenapyr	Pesticide (phenylpyrrole insecticide)
4-CPA	Pesticide (phenoxyacetic acid herbicide)
Diarrhetic shellfish toxin	Shellfish toxin (mainly refers to toxins produced by a harmful plankton accumulated in clams; toxic clams cause diarrhetic poisoning)
Cyclamic acid	Undesignated additive (sweetening agent)
Salmonella	Pathogenic microorganism (A bacterium that is ubiquitous in the intestines of animals as well as in nature, such as rivers, sewage and lakes. It contaminates meat, mostly poultry and eggs, and causes acute abdominal pain, diarrhea, fever and vomiting)
Cyanide compounds	Cyanide-related compounds (e.g., cyanogenic glycoside) found in vegetables
Diuron	Pesticide (phenylurea herbicide)
Dinotefuran	Pesticide (neonicotinoide insecticide)

Difenoconazole	Pesticide (triazole fungicide)
Cyfluthrin	Pesticide (pyrethroid insecticide)
Cyproconazole	Pesticide (azole fungicide)
Cypermethrin	Pesticide (pyrethroid insecticide)
Shigella	Pathogenic microorganism (A bacterium that normally lives in the intestines of humans and animals and causes gastroenteritis.)
Sorbic acid	Additive (preservative)
Daminozide	Pesticide (acid amide plant growth regulator)
Vibrio parahaemolyticus	Pathogenic microorganism (normal flora in seawater, a *Vibrio* species that mainly contaminates fishes and shellfishes and causes acute gastroenteritis)
Enterohemorrhagic *Escherichia coli* (*E. coli*)	Pathogenic microorganism (A bacterium that normally lives in the intestines of animals. It contaminates foods and drinking water by way of feces and urine, and causes acute abdominal pain and bloody diarrhea together with large amounts of fresh blood after early cold-like symptoms.)
Deoxynivalenol	Mycotoxin (produced by fungi such as *Fusarium*)
Tetracycline antibiotic	Antibiotic (mainly refers to oxytetracycline, chlortetracycline,tetracyline)
Tebufenozide	Pesticide (benzoyl hydrazide insecticide)
Triazophos	Pesticide (organophosphorus insecticide)
Sulfur dioxide	Additive (antioxidant)
Nitrofurans	Generic name for nitrofuran synthetic antimicrobial, an animal drug
Patulin	Fungal toxin (toxin produced by the fungi *Penicillium*, *Aspergillus*, etc.)
Parathion-methyl	Pesticide (organophosphorus insecticide)
Pirimiphos-methyl	Pesticide (organophosphorus insecticide)
Pyrimethanil	Pesticide (anilinopyrimidine fungicide)
Bifenazate	Pesticide (hydrazine insecticide)
Bifenthrin	Pesticide (pyrethroid insecticide)
Pyraclostrobin	Pesticide (strobilurin fungicide)
Fenitrothion	Pesticide (organophosphorus insecticide)
Fenpropathrin	Pesticide (pyrethroid insecticide)
Furazolidone	Animal drug (nitrofuran synthetic antimicrobial); generates AOZ when metabolized
Flusilazole	Pesticide (heterocyclic fungicide)
Propham	Pesticide (carbamate insecticide)
Profenofos	Pesticide (organophosphorus insecticide)
Flonicamid	Pesticide (Pyridine carboxamide insecticide)
Bromopropylate	Pesticide (organochlorine insecticide)
Hexaconazole	Pesticide (triazole fungicide)
Hexaflumuron	Pesticide (phenylurea fungicide)
Boscalid	Pesticide (anilide fungicide)

Phoxim	Pesticide (organophosphorus insecticide)
Polysorbate	Undesignated additive (emulsifying agent)
Paralytic shellfish poison	Shellfish poison (mainly refers to toxins produced by a harmful plankton accumulated in clams, toxic clams cause paralytic poisoning)
Malachite green	Animal drug (triphenylmethane symthetic antibacterial agent)
Methamidophos	Pesticide (organophosphorus insecticide)
Melamine	A chemical substance used as a primary raw material of melamine resin
Listeria monocytogenes	Pathogenic microorganism (a normal flora in the natural environment that contaminates milk products and causes listeriosis)
Lufenuron	Pesticide (benzoylphenyl urea insecticide)
EPN	Pesticide (organophosphorus insecticide)
SRM	Parts of a cow (the head [excluding tongue and cheek meat], the spinal cord, vertebral column, and ileum [up to a 2-m region from its connection with the cecum]) indicating the accumulation of an abnormal prion protein that is a possible causative agent of BSE (bovine spongiform encephalopathy)
TBHQ	Undesignated additive (antioxidant)