การปรับปรุงแก้ไขมาตรฐานสารเคมีตกค้างและสารปรุงแต่งอาหารในประเทศญี่ปุ่น

The 246th Materials for Promotion of Food Import Facilitation

กระทรวงสาธารณสุข แรงงานและสวัสดิการญี่ปุ่น พิจารณาปรับปรุงแก้ไขมาตรฐานสารเคมีทางการเกษตร ยาสัตว์ และสารปรุงแต่งอาหาร ดังนี้

(1) สารเคมีที่จะคงมาตรฐานเดิม หรือ มิได้เพิ่มความเข้มงวดด้านปริมาณการตกค้าง

1 Flometoquin (Pesticides : Insecticides)

2 Metominostrobin (Pesticides : Fungicides)

3 Etoxazole (Pesticides and Veterinary Drugs : Insecticides)

(2) สารเคมีที่จะเพิ่มความเข้มงวดด้านปริมาณการตกค้างในอาหารบางรายการ

1 Triflumizole (Pesticides : Fungicides)
จะเพิ่มความเข้มงวดต่อต้นหอม มะเขือม่วง สตรอเบอรี่ ผลิตภัณฑ์เนื้อสัตว์ปีกบางรายการ

2 1-Naphtaleneacetic acid (Pesticides : Plant growth regulators)
จะเพิ่มความเข้มงวดต่อส้ม natsudaidai

3 Bentazone (Pesticides : Herbicides)
จะเพิ่มความเข้มงวดต่อข้าว หอมหัวใหญ่ หน่อไม้ฝรั่ง กระเจี๊ยบเขียว กล้วย สับปะรด มะม่วง ฯลฯ

4 Permethrin (Pesticides and Veterinary Drugs : Insecticides)
จะเพิ่มความเข้มงวดต่อหัวบีท องุ่น อาโวคาโด

(3) จะขึ้นทะเบียนสารปรุงแต่งอาหาร อนุญาตการใช้ Potassium Hydrogen Carbonate ซึ่งเป็นสารที่ใช้กันอย่างแพร่หลายในกลุ่มประเทศยุโรปและอเมริกา เพื่อช่วยลดกรดทาร์ทาริกส่วนเกินในกระบวนการผลิตไวน์และน้ำองุ่น

(4) จะถอนทะเบียน เพื่อห้ามการใช้สารปรุงแต่งอาหาร 3-Acetyl-2,5-dimethylfuran (CAS No. 10599-70-9) ในอาหาร โดยอ้างอิงผลทดสอบของสถาบันวิจัยอาหารและยาแห่งชาติ ที่พบความเสี่ยงของการเป็นมะเร็งที่ตับ

หน่วยงานที่เกี่ยวข้องในประเทศไทย สามารถติดต่อขอความร่วมมือกระทรวงสาธารณสุขฯ ญี่ปุ่นพิจารณาแก้ไขปรับปรุงมาตรฐานที่บังคับใช้แล้วให้สอดคล้องกับมาตรฐานของประเทศไทยได้ โดยรวบรวมนำเสนอข้อมูลทางวิชาการสนับสนุนประกอบการพิจารณาของกระทรวงสาธารณสุขฯญี่ปุ่นได้เสมอ (Based on Application)

หากสามารถนำส่งข้อมูลภายในวันที่ 4 มีนาคม 2565 กระทรวงสาธารณสุขฯ ญี่ปุ่นอาจพิจารณาปรับปรุงแก้ไขร่างมาตฐานใหม่อีกก่อนรวบรวมแจ้ง WTO/SPS ในโอกาสต่อไป

Item 1. Establishment of the Maximum Residue Limits for Agricultural and Veterinary Chemicals in Foods

The Food Sanitation Act authorizes the Ministry of Health, Labour and Welfare (MHLW) to establish residue standards (maximum residue limits, "MRLs") for pesticides, feed additives, and veterinary drugs (hereafter referred to as "agricultural and veterinary chemicals") that may remain in foods. Any food for which standards are established pursuant to the provisions in Article 13, Paragraph 1 of the act is not permitted to be marketed in Japan unless it complies with the established standards.

On May 29, 2006, Japan introduced the Positive List System[1] for agricultural and veterinary chemicals in food. All foods distributed in the Japanese marketplace are subject to regulation of the system.

The MHLW is going to modify or newly set MRLs in some commodities for the following substances, including modification of MRLs in some commodities that were provisionally set at the introduction of the Positive List System:

Pesticides : **Triflumizole, 1-Naphthaleneacetic acid, Flometoquin, Bentazone, Metominostrobin,**
Pesticides and Veterinary drugs : **Etoxazole, Permethrin**

Item 2. Designation of Food Additives and Establishment of Specifications and Standards: Potassium hydrogen carbonate

Japan prohibits the sale etc. of food additives that are not designated by the Minister of Health, Labour and Welfare ("the Minister") under Article 12 of the Food Sanitation Act (Act No. 233 of 1947; "the Act"). In addition, when specifications or standards for food additives are stipulated in the Specifications and Standards for Foods, Food Additives, Etc. (Public Notice of the Ministry of Health and Welfare No. 370 of 1959) pursuant to Article 13 of the Act, the sale etc. of those additives are prohibited unless they meet the specifications or the standards.

On December 15, 2021, the Committee on Food Additives of the Food Sanitation Council established under the Pharmaceutical Affairs and Food Sanitation Council ("the Committee") deliberated on Potassium hydrogen carbonate and concluded that it is appropriate for this substance to be designated by the Minister as a food additive that is unlikely to cause harm to human health pursuant to Article 12 of the Act. The Committee also concluded that it is appropriate for compositional specifications and use standards to be established for the additive pursuant to Article 13 of the Act. See Summary and Attachment 1 for the details.

The government of Japan is taking necessary steps to designate Potassium hydrogen carbonate as a food additive.

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[1] The aim of the positive list system is to prohibit the distribution of any foods which contain agricultural chemicals at amounts exceeding a certain level (0.01 ppm) in the Japanese marketplace unless specific maximum residue limits (MRLs) have been set.

Item 3. Safety of flavoring agent 3-Acetyl-2,5-dimethylfuran, a food additive designated as "Ketones"

Japan prohibits the sale etc. of food additives that are not designated by the Minister of Health, Labour and Welfare ("the Minister") under Article 12 of the Food Sanitation Act (Act No. 233 of 1947; "the Act").
Ketones are designated as a group of flavoring agent, and there is a list of the ketones group published by MHLW. 3-Acetyl-2,5-dimethylfuran(ADF) is on the list. However, according to the research performed by National Institute of Health Sciences, the concern that ADF is a genotoxic carcinogen could not be ruled out, and MHLW will remove it from the list and advise related business operators not to use it.

<The manner of submitting comments>
The Ministry of Health, Labour and Welfare (MHLW) will amend the existing standards and specifications for food as shown in this document. Please provide comments in writing by Friday March 4, 2022. After the given date, comments should be directed to the enquiry point in accordance with the WTO/SPS Agreement.

If you wish to request Japan to adopt the same limits as your country's MRLs, you are requested to submit data supporting your country's MRLs, such as risk assessment and residue data.

<Contact person>
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Summary

Item 1: Establishment of Maximum Residue Limits for Agricultural Chemicals in Food

Triflumizole (Pesticides: Fungicides): Permitted for use in Japan. The MHLW is going to establish MRL in one commodity in response to a request for setting it by the Ministry of Agriculture, Forestry and Fisheries (MAFF) with the intention to expand its use pattern.

1-Naphthaleneacetic acid (Pesticides: Plant growth regulators): The MHLW is going to establish MRL in one commodity in response to a request for setting it by the MAFF with the intention to expand its use pattern.

Flometoquin, (Pesticides: Insecticides): Permitted for use in Japan. The MHLW is going to establish MRLs in several commodities in response to requests for setting them by the MAFF with the intention to expand its use patterns. These action will not strengthen the current regulation for any commodities.

Bentazone (Pesticides: Herbicides): Permitted for use in Japan. The MHLW is going to modify MRLs in some commodities that were provisionally set at the introduction of the Positive List System.

Metominostrobin (Pesticides: Fungicides): Permitted for use in Japan. The MHLW is going to establish MRL in one commodity in response to a request for setting it by the MAFF with the intention to expand its use patterns. The action will not strengthen the current regulation for any commodities.

Etoxazole (Pesticides and Veterinary drugs: Insecticides): Permitted for use in Japan. The MHLW is going to establish MRLs in some commodities in response to requests for setting them by the MAFF with the intention to expand its use patterns. These action will not strengthen the current regulation for any commodities.

Permethrin (Pesticides and Veterinary drugs: Insecticides): Permitted for use in Japan. The MHLW is going to establish MRLs in some commodities in response to requests for setting them by the MAFF with the intention to expand its use pattern

Item 2. Designation of Food Additives and Establishment of Specifications and Standards: Potassium hydrogen carbonate

Potassium hydrogen carbonate, when used in grape wine, dissociates into hydrogen carbonate and potassium ions in wine. It is considered that the hydrogen carbonate ion neutralizes acids in the wine and becomes carbon dioxide, most of which is released into the air. The potassium ion is considered to react with tartaric acid in the wine and precipitate as potassium hydrogen tartrate. The precipitated potassium hydrogen tartrate is removed by filtration. Thus, this additive is considered to help to remove excess tartaric acid contained in wine.
The European Union (the EU) permits the use of potassium hydrogen carbonate in wine as a processing aid as well as the use in powdered milk and dietary supplements. The EU does not specify the upper limit for wine.
The United States approves potassium hydrogen carbonate as a substance generally recognized as safe (GRAS) and permits its use in a wide range of foods including wine. When the substance is used for deacidification of wine or grape juice, the acidity after deacidification is not allowed to be below 5 g/L.
Australia permits the use of the substance as a processing aid in wine.

Item 3. Safety of flavoring agent 3-Acetyl-2,5-dimethylfuran, a food additive designated as "Ketones"

3-Acetyl-2,5-dimethylfuran was predicted as an Ames mutagenic compound by QSAR analysis and showed positive results in Ames test.
F344 *gpt* delta rats were given ADF by gavage for 13 weeks to determine the general toxicity, genotoxicity and carcinogenicity. Changes in the general toxicity parameters revealed systemic toxicological effects of ADF in rats. The results of *gpt* assay and GST-P immunohistochemistry, that *gpt* mutant frequency and number and area of GST-P positive foci were significantly increased in high doses group, suggest that ADF is a genotoxic hepatocarcinogen in rats._

Triflumizole

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	Country/Region ppm
Rice (brown rice)		0.05	0.05	§		
Wheat		0.7	0.7	§		
Barley		0.7	0.7	§		
Rye		0.7	0.7	§		
Corn (maize, including pop corn and sweet corn)		0.5	0.5	§		
Other cereal grains		0.7	0.7	§		
Sweet potato	○	0.03		Request		
Konjac		1	1	§		
Burdock		0.3	0.3	§		
Other composite vegetables		0.5	0.5	§		
Onion		0.2	0.2	§		
Welsh (including leek)	●	0.2	0.5	§		
Garlic		0.3	0.3	§		
Nira		3	3	§		
Asparagus		0.5	0.5	§		
Other liliaceous vegetables		2	2	§		
Carrot		0.5	0.5	§		
Parsley		1	1	§		
Celery		15	15	§		
Tomato		2	2	§		
Pimiento (sweet pepper)		3	3	§		
Egg plant	●	0.8	1	§		
Other solanaceous vegetables		1	1	§		
Cucumber (including gherkin)		0.7	0.7	§	0.5	
Pumpkin (including squash)		0.5	0.5	§		
Oriental pickling melon (vegetable)		0.3	0.3	§		
Water melon			0.2	§		
Water melon (whole commodity after removal of stems)		0.2		§		
Melons			0.3	§		
Melons (whole commodity after removal of stems)		1		§		
Other cucurbitaceous vegetables		1	1	§		
Okra		0.5	0.5	§		
Ginger		0.5	0.5	§		
Peas, immature (with pods)		5	5	§		
Apple		0.7	0.7	§		
Japanese pear		1	1	§		
Pear		1	1	§		
Quince		2	2	§		
Peach			0.7	§		
Peach (whole commodity after removal of stems and stones but the residue calculated and expressed on the whole commodity without stems)		9		§		
Japanese plum (including prune)		1	1	§		
Mume plum		1	1	§		
Cherry ※1		3	3	§	4	
Strawberry	●	0.8	1	§		
Grape		2	2	§	3	
Japanese persimmon		1	1	§		
Papaya ※1		1	1		2	
Pineapple ※2		2	2			
Mango		0.7	0.7	§		

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	Country/Region ppm
Other fruits		1	1	§		
Tea		15	15	§		
Hop ※3		8	8		30	
Other herbs		0.5	0.5	§		
Cattle, muscle		0.03	0.03			
Pig, muscle		0.03	0.03			
Other terrestrial mammals, muscle		0.03	0.03			
Cattle, fat		0.03	0.03		0.03	
Pig, fat		0.03	0.03		0.03	
Other terrestrial mammals, fat		0.03	0.03		0.03	
Cattle, liver		0.1	0.1		0.1	
Pig, liver		0.1	0.1		0.1	
Other terrestrial mammals, liver		0.1	0.1		0.1	
Cattle, kidney		0.1	0.1		0.1	
Pig, kidney		0.1	0.1		0.1	
Other terrestrial mammals, kidney		0.1	0.1		0.1	
Cattle, edible offal		0.1	0.1		0.1	
Pig, edible offal		0.1	0.1		0.1	
Other terrestrial mammals, edible offal		0.1	0.1		0.1	
Milk		0.02	0.02		0.02	
Chicken, muscle		0.02	0.02			
Other poultry, muscle		0.02	0.02			
Chicken, fat		0.02	0.02			
Other poultry, fat		0.02	0.02			
Chicken, liver	●	0.02	0.05			
Other poultry, liver	●	0.02	0.05			
Chicken, kidney	●	0.02	0.05			
Other poultry, kidney	●	0.02	0.05			
Chicken, edible offal	●	0.02	0.05			
Other poultry, edible offal	●	0.02	0.05			
Chicken eggs		0.02	0.02			
Other poultry, eggs		0.02	0.02			
Fish		0.3	0.3			

The residue definition for agricultural products is sum of triflumizole and metabolite FM-6-1【(*E*)-4-Chloro-α,α,α-Trifluoro-*N*-(1-amino-2-propoxyethylidene)-*o*-toluidine】, expressed as triflumizole. For animal products, the residue definition is sum of triflumizole, metabolite FA-1-1【4-Chloro-α,α,α-Trifluoro-*o*-toluidine】and metabolites converted to metabolite FA-1-1 in basic condition, expressed as triflumizole. For aquatic products, triflumizole only. The current residue definition for agricultural products is sum of triflumizole and metabolite FM-6-1【(*E*)-4-Chloro-α,α,α -Trifluoro-*N*-(1-amino-2-propoxyethylidene)-*o*-toluidin】, expressed as triflumizole. For animal products, the residue definition is sum of triflumizole and metabolites converted to FA-1-1【4-Chloro-α,α,α -Trifluoro-*o*-toluidine】in basic condition, expressed as triflumizole. For aquatic products, triflumizole only.

* The uniform limit 0.01 ppm will be applied to commodities not listed above.
* Diagonal line means a food category to which MRL applies is not set.
* In the Commodity column, for the food categories to which the word other is added, refer to the Notes given in the last two pages of the Attachment.

●: Commodities for which MRLs are to be lowered.
○: Commodities for which MRLs are to be raised.
§ : Permitted for use in Japan.
Request: Request for setting/revising MRL was made by the MAFF.

※1) The MRLs for cherries and papayas are based on the Codex MRLs. Japan's MRLs are derived by multiplying the Codex MRLs by the corresponding factors (0.66 for cherries and papayas) which are caluculated based on the plant metabolism studies because different residue definitions are used between Japan and Codex (The residue definition is residues analysed as FA-1-1 and expressed as parent triflumizole in Codex) .

※2) The MRL for pineapple maintaine the formal MRL set in before the positive list sysytem because there was detected record.

※3) The MRL for hop is set based on the residue data from the supervised residue trials in which analysed residue definition in Japan.

1-Naphthaleneacetic acid

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Pumpkin (including squash)	0.03	0.03	§		
Melons		0.2			
Melons (whole commodity after removal of stems)	0.02		§		
Unshu orange, pulp		0.5			
Unshu orange (whole commodity)	4		§		
Citrus natsudaidai, whole	● 4	5	§		
Lemon	5	5	§		
Orange (including navel orange)	5	5	§		
Grapefruit	5	5	§		
Lime	5	5	§		
Other citrus fruits	5	5	§		
Apple	0.5	0.5	§		
Japanese pear	0.3	0.3	§		
Pear	0.3	0.3	§		
Quince	0.3	0.3			
Cherry	0.1	0.1			
Mango	○ 0.02		Request		
Other fruits	0.1	0.1	§		
Other spices	○ 30	20	§		

The residue definition is 1-naphthaleneacetic acid (including its conjugates).

* The uniform limit 0.01 ppm will be applied to commodities not listed above.

* Diagonal line means a food category to which MRL applies is not set.

* In the Commodity column, for the food categories to which the word other is added, refer to the Notes given in the last two pages of the Attachment.

●: Commodities for which MRLs are to be lowered.

○: Commodities for which MRLs are to be raised.

§ : Permitted for use in Japan.

Request: Request for setting/revising MRL was made by the MAFF.

Flometoquin

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Japanese radish, roots (including radish)	0.1	0.1	§		
Japanese radish, leaves (including radish)	5	5	§		
Chinese cabbage	2	2	§		
Cabbage	0.5	0.5	§		
Cauliflower	6	6	§		
Broccoli	6	6	§		
Other composite vegetables	○ 40		Request		
Onion	0.05	0.05	§		
Welsh (including leek)	1	1	§		
Garlic	○ 0.05		Request		
Nira	6	6	§		
Asparagus	0.7	0.7	§		
Multiplying onion (including shallot)	2	2	§		
Tomato	2	2	§		
Pimiento (sweet pepper)	2	2	§		
Egg plant	1	1	§		
Other solanaceous vegetables	○ 5		Request		
Cucumber (including gherkin)	○ 0.3		Request		
Water melon (whole commodity after removal of stems)	0.7	0.7	§		
Spinach	2	2	§		
Unshu orange (whole commodity)	0.7	0.7	§		
Citrus natsudaidai, whole	1	1	§		
Lemon	1	1	§		
Orange (including navel orange)	1	1	§		
Grapefruit	1	1	§		
Lime	1	1	§		
Other citrus fruits	1	1	§		
Strawberry	2	2	§		
Mango	0.5	0.5	§		
Tea	5	5	§		
Other spices	3	3	§		
Other herbs	○ 25	2	§ ・ Request		

The residue definition is flometoquin only.

* The uniform limit 0.01 ppm will be applied to commodities not listed above.

* In the Commodity column, for the food categories to which the word other is added, refer to the Notes given in the last two pages of the Attachment.

○: Commodities for which MRLs are to be raised.

§ : Permitted for use in Japan.

Request: Request for setting/revising MRL was made by the MAFF.

Bentazone

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	Country/Region ppm
Rice (brown rice)	●	0.05	0.2	§		
Wheat	●	0.02	0.2	§	0.01	
Barley	●	0.05	0.2	§	0.01	
Rye	●	0.05	0.2	§	0.01	
Corn (maize, including pop corn and sweet corn)	●	0.02	0.2	§	0.01	
Buckwheat	●	0.01	0.1		0.01	
Other cereal grains	●	0.1	0.2	§	0.01	
Soybeans, dry	○	0.5	0.05	§	0.5	
Beans, dry	○	0.5	0.2	§	0.5	
Peas	●	0.5	1	§	0.5	
Broad beans	○	0.5	0.05		0.5	
Peanuts, dry		0.05	0.05		0.05	
Other pulses		0.5	0.5		0.5	
Potato		0.1	0.1		0.1	
Taro	●		0.05			
Sweet potato	●		0.05			
Japanese yam (including Chinese yam)	●		0.05			
Konjac	●		0.05			
Other potatoes	●		0.05			
Sugar beet	●		0.02			
Sugarcane	●		0.02			
Japanese radish, roots (including radish)	●		0.05			
Japanese radish, leaves (including radish)	●		0.05			
Turnip, roots (including rutabaga)	●		0.05			
Turnip, leaves (including rutabaga)	●		0.05			
Horseradish	●		0.05			
Watercress	●		0.05			
Chinese cabbage	●		0.05			
Cabbage	●		0.05			
Brussels sprouts	●		0.05			
Kale	●		0.05			
Komatsuna (Japanese mustard spinach)	●		0.05			
Kyona	●		0.05			
Qing-geng-cai	●		0.05			
Cauliflower	●		0.05			
Broccoli	●		0.05			
Other cruciferous vegetables	●		0.05			
Burdock	●		0.05			
Salsify	●		0.05			
Artichoke	●		0.05			
Chicory	●		0.05			
Endive	●		0.05			
Shungiku	●		0.05			
Lettuce (including cos lettuce and leaf lettuce)	●		0.05			
Other composite vegetables	○	0.1	0.05		0.1	
Onion	●	0.1	0.2	§	0.04	
Welsh (including leek)	●		0.05			
Garlic	●		0.05			
Nira	●		2			
Asparagus	●		0.05			
Multiplying onion (including shallot)	●		0.05			

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	Country/Region ppm
Other liliaceous vegetables	●	0.05	2	§		
Carrot	●		0.05			
Parsnip	●		0.05			
Parsley	○	0.1	0.05		0.1	
Celery	○	0.1	0.05		0.1	
Mitsuba	○	0.1	0.05		0.1	
Other umbelliferous vegetables	○	0.1	0.05	§	0.1	
Tomato	●		0.05			
Pimiento (sweet pepper)	●		0.5			
Egg plant	●		0.05			
Other solanaceous vegetables	●		0.05			
Cucumber (including gherkin)	●		0.1			
Pumpkin (including squash)	●		0.05			
Oriental pickling melon (vegetable)	●		0.05			
Water melon	●		0.05			
Melons	●		0.05			
Makuwauri melon	●		0.05			
Other cucurbitaceous vegetables	●		0.05			
Spinach	●		0.05			
Bamboo shoots	●		0.1			
Okra	●		0.05			
Ginger	●		0.05			
Peas, immature (with pods)	○	2	0.5	§	1.5	
Kidney beans, immature (with pods)	●	0.01	0.2		0.01	
Green soybeans	○	0.08	0.05		0.01	0.3* EU
Button mushroom	●		0.05			
Shiitake mushroom	●		0.05			
Other mushrooms	●		0.05			
Other vegetables	○	2	0.1	§	1.5	
Unshu orange, pulp	●		0.02			
Citrus natsudaidai, whole	●		0.02			
Lemon	●		0.02			
Orange (including navel orange)	●		0.02			
Grapefruit	●		0.02			
Lime	●		0.02			
Other citrus fruits	●		0.02			
Apple	●		0.02			
Japanese pear	●		0.02			
Pear	●		0.02			
Quince	●		0.02			
Loquat	●		0.02			
Peach	●		0.02			
Nectarine	●		0.02			
Apricot	●		0.02			
Japanese plum (including prune)	●		0.02			
Mume plum	●		0.02			
Cherry	●		0.02			
Strawberry	●		0.02			
Raspberry	●		0.02			
Blackberry	●		0.02			
Blueberry	●		0.05			

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	Country/Region ppm
Cranberry	●		0.02			
Huckleberry	●		0.02			
Other berries	●		0.02			
Grape	●		0.02			
Japanese persimmon	●		0.02			
Banana	●		0.02			
Kiwifruit	●		0.02			
Papaya	●		0.02			
Avocado	●		0.02			
Pineapple	●		0.02			
Guava	●		0.02			
Mango	●		0.02			
Passion fruit	●		0.02			
Date	●		0.02			
Other fruits	●		0.02			
Sunflower seeds	●		0.02			
Sesame seeds	●		0.02			
Safflower seeds	●		0.02			
Cotton seeds	●		0.02			
Rapeseeds	●		0.02			
Other oil seeds	●	0.02	0.1		0.02	
Ginkgo nut	●		0.02			
Chestnut	●		0.02			
Pecan	●		0.02			
Almond	●		0.02			
Walnut	●		0.02			
Other nuts	●		0.02			
Tea	●		0.02			
Coffee beans	●		0.02			
Cacao beans	●		0.02			
Hop	●		0.02			
Other spices	●		0.5			
Other herbs	●	0.1	2		0.1	
Cattle, muscle	●	0.01	0.05		0.01	
Pig, muscle	●	0.01	0.05		0.01	
Other terrestrial mammals, muscle	●	0.01	0.05		0.01	
Cattle, fat	●	0.01	0.05		0.01	
Pig, fat	●	0.01	0.05		0.01	
Other terrestrial mammals, fat	●	0.01	0.05		0.01	
Cattle, liver	●	0.04	0.05		0.04	
Pig, liver	●	0.04	0.05		0.04	
Other terrestrial mammals, liver	●	0.04	0.05		0.04	
Cattle, kidney	○	0.08	0.05		0.04	
Pig, kidney	○	0.08	0.05		0.04	
Other terrestrial mammals, kidney	○	0.08	0.05		0.04	
Cattle, edible offal	○	0.08	0.05		0.04	
Pig, edible offal	○	0.08	0.05		0.04	
Other terrestrial mammals, edible offal	○	0.08	0.05		0.04	
Milk	●	0.01	0.05		0.01	
Chicken, muscle	●	0.03	0.05		0.03	
Other poultry, muscle	●	0.03	0.05		0.03	

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	Country/Region ppm
Chicken, fat	●	0.03	0.05		0.03	
Other poultry, fat	●	0.03	0.05		0.03	
Chicken, liver	○	0.07	0.05		0.07	
Other poultry, liver	○	0.07	0.05		0.07	
Chicken, kidney	○	0.07	0.05		0.07	
Other poultry, kidney	○	0.07	0.05		0.07	
Chicken, edible offal	○	0.07	0.05		0.07	
Other poultry, edible offal	○	0.07	0.05		0.07	
Chicken eggs	●	0.01	0.05		0.01	
Other poultry, eggs	●	0.01	0.05		0.01	

The residue definition is bentazone only.

* The uniform limit 0.01 ppm will be applied to commodities not listed above.

* Shaded figures indicate provisional MRLs.

* In the Commodity column, for the food categories to which the word other is added, refer to the Notes given in the last two pages of the Attachment.

●: Commodities for which MRLs are to be lowered.

○: Commodities for which MRLs are to be raised.

§: Permitted for use in Japan.

* : EU residue definition for MRL: sum of bentazone, Metabolite B (6-hydroxy) and Metabolite C (8-hydroxy), expressed as bentazone.

The MRLs for animal commodities (mammals) are set by using re-calculated dietary burden, because estimated maximum residues by JMPR (2016) are considered to be incorrect.

Metominostrobin

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Rice (brown rice)	0.5	0.5	§		
Mango	○ 1		Request		
Fish	0.3	0.3			

The residue definition is metominostrobin only.

* The uniform limit 0.01 ppm will be applied to commodities not listed above.

○: Commodities for which MRLs are to be raised.

§ : Permitted for use in Japan.

Request: Request for setting/revising MRL was made by the MAFF.

Etoxazole

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Beans, dry	0.3	0.3	§		
Sweet potato	0.05	0.05	§		
Other composite vegetables	50	50	§		
Nira	○ 2		Request		
Mitsuba	15	15	§		
Egg plant	0.5	0.5	§		
Cucumber (including gherkin)	0.3	0.3	§	0.02	
Water melon		0.1	§		
Water melon (whole commodity after removal of stems)	0.2		§		
Melons		0.2	§		
Melons (whole commodity after removal of stems)	0.3		§		
Makuwauri melon		0.2			
Makuwauri melon (whole commodity after removal of stems)	0.2				0.20 USA
Other cucurbitaceous vegetables	0.2	0.2	§		
Spinach	○ 20		Request		
Unshu orange, pulp		0.5	§		
Unshu orange (whole commodity)	2		§	0.1	
Citrus natsudaidai, whole	0.5	0.5	§	0.1	
Lemon	0.7	0.7	§	0.1	
Orange (including navel orange)	0.7	0.7	§	0.1	
Grapefruit	0.7	0.7	§	0.1	
Lime	0.7	0.7	§	0.1	
Other citrus fruits	0.7	0.7	§	0.1	
Apple	0.3	0.3	§	0.07	
Japanese pear	0.3	0.3	§	0.07	
Pear	0.3	0.3	§	0.07	
Quince	0.2	0.2		0.07	0.20 USA
Loquat		0.2	§		
Loquat (whole commodity after removal of stems)	1		§	0.07	
Peach		0.05	§		
Peach (whole commodity after removal of stems and stones but the residue calculated and expressed on the whole commodity without stems)	0.7		§		
Nectarine	0.5	0.5	§		
Apricot	0.1	0.1			
Japanese plum (including prune)	0.5	0.5	§		
Mume plum	0.1	0.1			
Cherry	1	1	§		1.0 USA
Strawberry	0.5	0.5	§		
Grape	0.5	0.5	§	0.5	
Mango	0.3	0.3	§		
Other fruits	0.5	0.5	§		
Cotton seeds	0.2	0.2			0.2 Australia
Ginkgo nut	0.01	0.01		0.01	
Chestnut	0.01	0.01		0.01	
Pecan	0.01	0.01		0.01	
Almond	0.01	0.01		0.01	
Walnut	0.01	0.01		0.01	
Other nuts	0.01	0.01		0.01	
Tea	15	15	§	15	
Hop	15	15	§	15	

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Other spices	10	10	§		
Other herbs	30	30	§	15	
Cattle, muscle	0.05	0.05	§		
Pig, muscle	0.01	0.01			
Other terrestrial mammals, muscle	0.01	0.01			
Cattle, fat	0.05	0.05	§	0.01	
Pig, fat	0.01	0.01		0.01	
Other terrestrial mammals, fat	0.01	0.01		0.01	
Cattle, liver	0.05	0.05	§	0.01	
Pig, liver	0.01	0.01		0.01	
Other terrestrial mammals, liver	0.01	0.01		0.01	
Cattle, kidney	0.05	0.05	§	0.01	
Pig, kidney	0.01	0.01		0.01	
Other terrestrial mammals, kidney	0.01	0.01		0.01	
Cattle, edible offal	0.05	0.05	§	0.01	
Pig, edible offal	0.01	0.01		0.01	
Other terrestrial mammals, edible offal	0.01	0.01		0.01	
Milk	0.01	0.01	§	0.01	
Chicken, muscle	0.01	0.01	§		
Other poultry, muscle	0.01	0.01			
Chicken, fat	0.2	0.2	§		
Other poultry, fat	0.2	0.2			
Chicken, liver	0.04	0.04	§		
Other poultry, liver	0.04	0.04			
Chicken, kidney	0.01	0.01	§		
Other poultry, kidney	0.01	0.01			
Chicken, edible offal	0.04	0.04	§		
Other poultry, edible offal	0.04	0.04			
Chicken eggs	0.2	0.2	§		
Other poultry, eggs	0.2	0.2			
Honey (including royal-jelly)	0.05	0.05			

The residue definition is etoxazole only.

* The uniform limit 0.01 ppm will be applied to commodities not listed above.

* Diagonal line means a food category to which MRL applies is not set.

* In the Commodity column, for the food categories to which the word other is added, refer to the Notes given in the last two pages of the Attachment.

O: Commodities for which MRLs are to be raised.

§ : Permitted for use in Japan.

Request: Request for setting/revising MRL was made by the MAFF.

Permethrin

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Wheat	2	2		2	
Barley	2	2		2	
Rye	2	2		2	
Corn (maize, including pop corn and sweet corn)	2	2	§	2	
Buckwheat	2	2		2	
Other cereal grains	2	2		2	
Soybeans, dry	0.05	0.05	§	0.05	
Beans, dry	0.1	0.1	§	0.1	
Broad beans	0.1	0.1	§	0.1	
Peanuts, dry	0.1	0.1	§	0.1	
Other pulses	0.1	0.1		0.1	
Potato	0.05	0.05	§	0.05	
Taro	0.03	0.03	§		
Sweet potato	0.02	0.02	§		
Japanese yam (including Chinese yam)	0.01	0.01	§		
Sugar beet	● 0.05	0.2		0.05	
Japanese radish, roots (including radish)	0.1	0.1	§	0.1	
Japanese radish, leaves (including radish)	0.5	0.5	§		
Turnip, roots (including rutabaga)	0.5	0.5	§		
Turnip, leaves (including rutabaga)	15	15	§		
Horseradish	0.5	0.5		0.5	
Chinese cabbage	5	5	§	5	
Cabbage	5	5	§	5	
Brussels sprouts	1	1		1	
Kale	20	20	§	5	
Komatsuna (Japanese mustard spinach)	20	20	§		
Kyona	10	10	§		
Qing-geng-cai	5	5	§		
Cauliflower	0.5	0.5	§	0.5	
Broccoli	2	2	§	2	
Other cruciferous vegetables	○ 40	20	§ · Request	0.1	
Burdock	1	1	§		
Artichoke	5	5			5.0 USA
Endive	0.05	0.05	§		
Shungiku	3	3	§		
Lettuce (including cos lettuce and leaf lettuce)	20	20	§	2	
Other composite vegetables	2	2	§		
Onion	0.1	0.1	§		
Welsh (including leek)	2	2	§	0.5	
Garlic	0.05	0.05	§		
Nira	0.05	0.05	§		
Asparagus	3	3	§	1	
Multiplying onion (including shallot)	0.02	0.02	§		
Other liliaceous vegetables	0.5	0.5	§	0.5	
Carrot	0.1	0.1	§	0.1	
Parsley	0.1	0.1	§		
Celery	2	2		2	
Tomato	○ 4	1	§ · Request	1	
Pimiento (sweet pepper)	4	4	§	1	
Egg plant	1	1	§	1	
Other solanaceous vegetables	3	3	§	1	

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Cucumber (including gherkin)	0.5	0.5	§	0.5	
Pumpkin (including squash)	0.5	0.5	§	0.5	
Water melon (whole commodity after removal of stems)	0.7	0.7	§		
Melons (whole commodity after removal of stems)	0.5	0.5	§	0.1	
Other cucurbitaceous vegetables	2	2	§		
Spinach	5	5	§	2	
Okra	3	3	§		
Ginger	0.7	0.7	§		
Peas, immature (with pods)	3	3	§	0.1	
Kidney beans, immature (with pods)	1	1	§	1	
Green soybeans	3	3	§		
Button mushroom	0.1	0.1		0.1	
Other vegetables	3	3	§		
Unshu orange (whole commodity)	3	3	§	0.5	
Citrus natsudaidai, whole	5	5	§	0.5	
Lemon	5	5	§	0.5	
Orange (including navel orange)	5	5	§	0.5	
Grapefruit	5	5	§	0.5	
Lime	5	5	§	0.5	
Other citrus fruits	5	5	§	0.5	
Apple	2	2	§	2	
Japanese pear	2	2	§	2	
Pear	2	2	§	2	
Quince	2	2	§	2	
Loquat (whole commodity after removal of stems)	5	5	§	2	
Peach (whole commodity after removal of stems and s	7	7	§	2	
Nectarine	2	2	§	2	
Apricot	2	2		2	
Japanese plum (including prune)	2	2	§	2	
Mume plum	5	5	§	2	
Cherry	7	7	§	2	
Strawberry	1	1	§	1	
Raspberry	1	1		1	
Blackberry	1	1		1	
Blueberry	3	3	§		
Other berries	2	2	§	2	
Grape	● 7	8	§	2	
Japanese persimmon	4	4	§		
Kiwifruit (whole commodity)	10	10	§	2	
Avocado	● 1	5			
Other fruits	5	5	§	1	
Sunflower seeds	1	1		1	
Sesame seeds	2	2	§		
Cotton seeds	0.5	0.5		0.5	
Rapeseeds	0.05	0.05		0.05	
Other oil seeds	1	1	§	1	
Chestnut	0.03	0.03	§		
Almond	0.1	0.1		0.1	
Walnut	0.05	0.05	§		
Other nuts	0.05	0.05		0.05	
Tea	20	20	§	20	

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	Country/Region ppm
Coffee beans	0.05	0.05		0.05	
Hop	50	50		50	
Other spices	15	15	§	0.05	
Other herbs	20	20	§		
Cattle, muscle	1	1	§		
Pig, muscle	1	1	§		
Other terrestrial mammals, muscle	1	1	§		
Cattle, fat	1	1	§	1	
Pig, fat	1	1	§	1	
Other terrestrial mammals, fat	1	1	§	1	
Cattle, liver	0.1	0.1	§	0.1	
Pig, liver	0.1	0.1	§	0.1	
Other terrestrial mammals, liver	0.1	0.1	§	0.1	
Cattle, kidney	0.1	0.1	§	0.1	
Pig, kidney	0.1	0.1	§	0.1	
Other terrestrial mammals, kidney	0.1	0.1	§	0.1	
Cattle, edible offal	0.1	0.1	§	0.1	
Pig, edible offal	0.1	0.1	§	0.1	
Other terrestrial mammals, edible offal	0.1	0.1	§	0.1	
Milk	0.1	0.1	§		
Chicken, muscle	0.1	0.1	§	0.1	
Other poultry, muscle	0.1	0.1	§	0.1	
Chicken, fat	0.1	0.1	§		
Other poultry, fat	0.1	0.1	§		
Chicken, liver	0.1	0.1	§		
Other poultry, liver	0.1	0.1	§		
Chicken, kidney	0.1	0.1	§		
Other poultry, kidney	0.1	0.1	§		
Chicken, edible offal	0.1	0.1	§		
Other poultry, edible offal	0.1	0.1	§		
Chicken eggs	0.1	0.1	§	0.1	
Other poultry, eggs	0.1	0.1	§	0.1	
Wheat flour (limited to whole grain)	2	2		2	
Wheat flour (except whole grain)	0.5	0.5		0.5	
Wheat germ	2	2		2	
Wheat bran	5	5		5	
Soybean oil	0.1	0.1		0.1	
Sunflower oil	1	1		1	
Cottonseed oil	0.1	0.1		0.1	

The residue definition is the sum of *cis*-permethrin and *trans*-permethrin.

* The uniform limit 0.01 ppm will be applied to commodities not listed above.
* Diagonal line means a food category to which MRL applies is not set.
* In the Commodity column, for the food categories to which the word other is added, refer to the Notes given in the last two pages of the Attachment.

●: Commodities for which MRLs are to be lowered.
○: Commodities for which MRLs are to be raised.
§ : Permitted for use in Japan.
Request: Request for setting/revising MRL was made by the MAFF.

Notes:

"Other cereal grains" refers to all cereal grains, except rice (brown rice), wheat, barley, rye, corn (maize), and buckwheat.

"Beans, dry" includes butter beans, cowbeans (red beans), lentil, lima beans, pegia, sultani, sultapya and white beans.

"Other legumes/pulses" refers to all legumes/pulses, except soybeans (dry), beans (dry), peas, broad beans, peanuts (dry), and spices.

"Other potatoes" refers to all potatoes, except potato, taro, sweet potato, yam, and konjac.

"Other cruciferous vegetables" refers to all cruciferous vegetables, except Japanese radish roots and leaves (including radish), turnip roots and leaves, horseradish, watercress, Chinese cabbage, cabbage, brussels sprouts, kale, *komatsuna* (Japanese mustard spinach), *kyona*, qing-geng-cai, cauliflower, broccoli, and herbs.

"Other composite vegetables" refers to all composite vegetables, except burdock, salsify, artichoke, chicory, endive, *shungiku*, lettuce (including cos lettuce and leaf lettuce), and herbs.

"Other liliaceous vegetables" refers to all liliaceous vegetables, except onion, welsh (including leek), garlic, *nira*, asparagus, multiplying onion, and herbs.

"Other umbelliferous vegetables" refers to all umbelliferous vegetables, except carrot, parsnip, parsley, celery, *mitsuba*, spices, and herbs.

"Other solanaceous vegetables" refers to all solanaceous vegetables, except tomato, pimiento (sweet pepper), and egg plant.

"Other cucurbitaceous vegetables" refers to all cucurbitaceous vegetables, except cucumber (including gherkin), pumpkin (including squash), oriental pickling melon (vegetable), watermelon, melons, and *makuwauri* melon.

"Other mushrooms" refers to all mushrooms, except button mushroom, and *shiitake* mushroom.

"Other vegetables" refers to all vegetables, except potatoes, sugar beet, sugarcane, cruciferous vegetables, composite vegetables, liliaceous vegetables, umbelliferous vegetables, solanaceous vegetables, cucurbitaceous vegetables, spinach, bamboo shoots, okra, ginger, peas (with pods, immature), kidney beans (with pods, immature), green soybeans, mushrooms, spices, and herbs.

"Other citrus fruits" refers to all citrus fruits, except *unshu* orange (pulp), citrus *natsudaidai* (pulp), citrus *natsudaidai* (peel), citrus *natsudaidai* (whole), lemon, orange (including navel orange), grapefruit, lime, and spices.

"Other berries" refers to all berries, except strawberry, raspberry, blackberry, blueberry, cranberry, and huckleberry.

"Other fruits" refers to all fruits, except citrus fruits, apple, Japanese pear, pear, quince, loquat, peach, nectarine, apricot, Japanese plum (including prune), mume plum, cherry, berries, grape, Japanese persimmon, banana, kiwifruit, papaya, avocado, pineapple, guava, mango, passion fruit, date and spices.

"Other oil seeds" refers to all oil seeds, except sunflower seeds, sesame seeds, safflower seeds, cotton seeds, rapeseeds and spices.

"Other nuts" refers to all nuts, except ginkgo nut, chestnut, pecan, almond and walnut.

"Other spices" refers to all spices, except horseradish, *wasabi* (Japanese horseradish) rhizomes, garlic, peppers chili, paprika, ginger, lemon peels, orange peels (including navel orange), *yuzu* (Chinese citron) peels and sesame seeds.

"Other spices (limited to roots and rhizome)" includes asafoetida roots, turmeric root, galangal rhizome and licorice root.

"Other herbs" refers to all herbs, except watercress, *nira*, parsley stems and leaves, celery stems and leaves.

"Edible offal" refers to all edible parts, except muscle, fat, liver, and kidney.

"Other terrestrial mammals" refers to all terrestrial mammals, except cattle and pig.

"Other poultry" refers to all poultry, except chicken.

"Other fish" refers to all fish, except salmoniformes, anguilliformes, and perciformes.

"Other aquatic animals" refers to all aquatic animal, except fish, shelled molluscs and crustaceans.

Potassium Hydrogen Carbonate

炭酸水素カリウム

Standards for Use (draft)

Permitted for use in grape juice used for wine production and in grape wine only.

Compositional Specifications (draft)

Substance Name Potassium Hydrogen Carbonate (Potassium Bicarbonate, Potassium Acid Carbonate)

Molecular Formula $KHCO_3$

Molecular Weight 100.12

Chemical Name [CAS number]
Potassium hydrogencarbonate [298-14-6]

Content Potassium Hydrogen Carbonate, when dried, contains not less than 99.0% of potassium hydrogen carbonate ($KHCO_3$).

Description Potassium Hydrogen Carbonate occurs as colorless crystals, or as white granules or powder.

Identification Potassium Hydrogen Carbonate responds to all the tests for Potassium Salt and for Bicarbonate in the Qualitative Tests.

Purity

(1) Clarity of solution Almost clear (1.0 g, water 10 mL).

(2) Lead Not more than 2 µg/g as Pb (2.0 g, Method 5, Control Solution: Lead Standard Solution 4.0 mL, Flame Method).

Sample Solution To the specified amount of Potassium Hydrogen Carbonate, add 20 mL of diluted hydrochloric acid (1 in 4), and boil gently for 5 minutes with a watch glass covering it. Allow to cool, and use the solution as the sample solution. If the sample does not dissolve completely, evaporate it to dryness, and add 20 mL of diluted hydrochloric acid (1 in 4) to the residue. Boil gently for 5 minutes, and allow to cool.

(3) Arsenic Not more than 3 µg/g as As (0.50 g, Standard Color: Arsenic Standard Solution 3.0 mL, Apparatus B).

Test Solution Weigh the specified amount of Potassium Hydrogen Carbonate, and dissolve it by adding 3 mL of water and 2 mL of hydrochloric acid.

Loss on Drying Not more than 0.25% (4 hours).

Assay Weigh accurately about 2 g of Potassium Hydrogen Carbonate, previously dried, dissolve it in 25 mL of water, and titrate with 0.5 mol/L sulfuric acid (indicator: 3 drops of bromophenol blue TS). Boil near the endpoint to let the carbon dioxide out, cool, and continue the titration. The endpoint is when the color of the solution changes from blue-purple to bluish-green.

Each mL of 0.5 mol/L sulfuric acid = 100.1 mg of $KHCO_3$