THE 230th CONFERENCE FOR PROMOTION OF FOOD IMPORT FACILITATION

(FOOD SAFETY GROUP)

Food Safety Standards and Evaluation Division

Pharmaceutical Safety and Environmental Health Bureau

Ministry of Health, Labour and Welfare

Date ：Thursday January 16, 2020（10:00－12:00）

Place：Ministry of Health, Labour and Welfare
Temporary Meeting Room No. 1
1-2-2, Kasumigaseki, Chiyoda-ku, Tokyo

Agenda:

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

(1) Establishment of the Maximum Residue Limits for Agricultural Chemicals in Foods

Pesticides: Aldrin and Dieldrin , Isofetamid, Ipflufenoquin ,

1,3-Dichloropropene, Dazomet, Metam and Methyl isothiocyanate

Pesticides and Veterinary drugs: Carbaryl

(2) Establishment and Revision of Analytical Methods for Veterinary Chemicals in Foods

Veterinary drugs: Betamethasone and Dexamethasone

<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 **Thursday, January 30, 2020**. 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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Item 1
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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 11, 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:

Pesticides : Aldrin and Dieldrin , Isofetamid, Ipflufenoquin ,

1,3-Dichloropropene, Dazomet, Metam and Methyl isothiocyanate

Pesticides and Veterinary drugs: Carbaryl

Establishment and Revision of Analytical Methods for Veterinary Chemicals in Foods

Veterinary drugs: Betamethasone and Dexamethasone

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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.

Summary

Establishment of Maximum Residue Limits for Agricultural Chemicals in Food

Aldrin and Dieldrin (pesticide: insecticide): Not 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.

Isofetamid (pesticide: fungicide): Permitted for use in Japan.The MHLW is going to establish MRLs in some commodities in response to a request for setting them by the Ministry of Agriculture, Forestry and Fisheries (MAFF) with the intention to expand its use pattern. The MHLW is also going to establish MRL in some commodities in response to a request for setting import tolerances based on the Guideline for Application for Establishment and Revision of Maximum Residue Limits for Agricultural Chemicals Used outside Japan (Shokuan No. 0205001, 5 February 2004). These action will not strengthen the current regulation for any commodities.

Ipflufenoquin (pesticide: fungicide): Not permitted for use in Japan. The MHLW is going to establish MRLs in some commodities in response to a request for setting them by the MAFF with the intention to newly register this substance as a pesticide. This action will not strengthen the current regulation for any commodities

1,3-Dichloropropene (pesticide: insecticide): Permitted for use in Japan. The MHLW is going to establish MRLs in some commodities in response to a request for setting MRL by the MAFF with the intention to expand its use pattern. This action will not strengthen the current regulation for any commodities.

Dazomet, **Metam and Methyl isothiocyanate (pesticide: soil fumigant)**: Permitted for use in Japan. The MHLW is going to establish MRLs in some commodities in response to a request for setting them by the MAFF with the intention to expand its use pattern.

Carbaryl (pesticide and veterinary drug: insecticide and plant growth-regulating agent): Permitted for use as a pesticide and a veterinary drug in Japan. The MHLW is also going to modify MRLs in some commodities that were provisionally set at the introduction of the Positive List System Permitted for use in Japan.

Establishment and Revision of Analytical Methods for Veterinary Chemicals in Foods

Simultaneous Analytical Method for both Betamethasone and Dexamethasone.

Aldrin and Dieldrin

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	National ppm
Rice (brown rice)	○	0.01#	N.D.			
Wheat	○	0.02	N.D.		0.02	
Barley	○	0.02	0.02		0.02	
Rye	○	0.02	0.02		0.02	
Corn (maize, including pop corn and sweet corn)	○	0.02	N.D.		0.02	
Buckwheat	○	0.02	N.D.		0.02	
Other cereal grains	○	0.02	0.02		0.02	
Soybeans, dry	○	0.05	0.05		0.05	
Beans, dry	○	0.05	0.05		0.05	
Peas	○	0.05	N.D.		0.05	
Broad beans	○	0.05	N.D.		0.05	
Peanuts, dry	●	0.05	0.06		0.05	
Other pulses	○	0.05	0.05		0.05	
Potato	○	0.1	N.D.		0.1	
Taro	○	0.1	0.1		0.1	
Sweet potato	○	0.1	0.1		0.1	
Japanese yam (including Chinese yam)	○	0.1	0.1		0.1	
Konjac	○	0.1	0.1		0.1	
Other potatoes	○	0.1	0.1		0.1	
Sugar beet	○	0.1	0.1		0.1	
Sugarcane	●		0.01			
Japanese radish, roots (including radish)	○	0.1	0.02		0.1	
Japanese radish, leaves (including radish)	○	0.05	0.02		0.05	
Turnip, roots (including rutabaga)	○	0.1	0.1		0.1	
Turnip, leaves (including rutabaga)	○	0.05	0.05		0.05	
Horseradish	○	0.1	0.1		0.1	
Watercress	○	0.05	0.05		0.05	
Chinese cabbage	○	0.05	0.02		0.05	
Cabbage	●		0.02			
Brussels sprouts	●		0.02			
Kale	○	0.05	0.05		0.05	
Komatsuna (Japanese mustard spinach)	○	0.05	N.D.		0.05	
Kyona	○	0.05	N.D.		0.05	
Qing-geng-cai	○	0.05	0.05		0.05	
Cauliflower	○	0.01#	N.D.			
Broccoli	○	0.01#	N.D.			
Other cruciferous vegetables	○	0.1	0.1		0.1	
Burdock	○	0.1	0.1		0.1	
Salsify	○	0.1	0.1		0.1	
Artichoke	●		0.06			
Chicory	○	0.05	0.05		0.05	
Endive	○	0.05	0.05		0.05	
Shungiku	○	0.05	0.05		0.05	
Lettuce (including cos lettuce and leaf lettuce)	○	0.05	0.02		0.05	
Other composite vegetables	○	0.1	0.1		0.1	
Onion	○	0.05	0.05		0.05	
Welsh (including leek)	○	0.05	0.05		0.05	
Garlic	○	0.05	0.05		0.05	
Nira	●	0.05	0.06		0.05	
Asparagus	○	0.01#	N.D.			
Multiplying onion (including shallot)	○	0.05	0.05		0.05	

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	National ppm
Other liliaceous vegetables	○ 0.05	0.05		0.05	
Carrot	○ 0.1	0.1		0.1	
Parsnip	○ 0.1	0.1		0.1	
Parsley	●	0.06			
Celery	○ 0.01#	N.D.			
Mitsuba	○ 0.05	N.D.		0.05	
Other umbelliferous vegetables	○ 0.1	0.1		0.1	
Tomato	●	0.02			
Pimiento (sweet pepper)	●	0.02			
Egg plant	●	0.02			
Other solanaceous vegetables	○ 0.05	0.05		0.05	
Cucumber (including gherkin)	○ 0.1	0.02		0.1	
Pumpkin (including squash)	○ 0.1	0.1		0.1	
Oriental pickling melon (vegetable)	○ 0.1	0.1		0.1	
Water melon		N.D.			
Water melon (whole commodity after removal of stems.)	○ 0.1			0.1	
Melons		0.1			
Melons (whole commodity after removal of stems.)	○ 0.1			0.1	
Makuwauri melon		0.1			
Makuwauri melon (whole commodity after removal of stems.)	○ 0.1			0.1	
Other cucurbitaceous vegetables	○ 0.1	0.1		0.1	
Spinach	○ 0.05	N.D.		0.05	
Bamboo shoots	●	0.06			
Okra	●	0.06			
Ginger	●	0.06			
Peas, immature (with pods)	○ 1	N.D.		1	
Kidney beans, immature (with pods)	○ 0.05	N.D.		0.05	
Green soybeans	○ 0.05	0.05		0.05	
Button mushroom	●	0.06			
Shiitake mushroom	●	0.06			
Other mushrooms	●	0.06			
Other vegetables	○ 0.1	0.1		0.1	
Unshu orange, pulp		N.D.			
Unshu orange (whole commodity.)	○ 0.05			0.05	
Citrus natsudaidai, pulp		N.D.			
Citrus natsudaidai, peels		N.D.			
Citrus natsudaidai, whole	○ 0.05			0.05	
Lemon	○ 0.05	0.05		0.05	
Orange (including navel orange)	○ 0.05	0.05		0.05	
Grapefruit	○ 0.05	0.05		0.05	
Lime	○ 0.05	0.05		0.05	
Other citrus fruits	○ 0.05	0.05		0.05	
Apple	○ 0.05	N.D.		0.05	
Japanese pear	○ 0.05	N.D.		0.05	
Pear	○ 0.05	N.D.		0.05	
Quince	○ 0.05	0.05		0.05	
Loquat		N.D.			
Loquat (whole commodity after removal of stems.)	○ 0.05			0.05	
Peach		N.D.			
Peach (whole commodity after removal of stems and stones but the residue calculated and expressed on the whole commodity without stems.)	○ 0.01#				
Nectarine	●	0.05			

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	National ppm
Apricot	●		0.05			
Japanese plum (including prune)	●		0.05			
Mume plum	●		0.05			
Cherry	○	0.01#	N.D.			
Strawberry	○	0.01#	N.D.			
Raspberry	●		0.05			
Blackberry	●		0.05			
Blueberry	●		0.05			
Cranberry	●		0.05			
Huckleberry	●		0.05			
Other berries	●		0.06			
Grape	○	0.01#	N.D.			
Japanese persimmon	○	0.01#	N.D.			
Banana	●		0.05			
Kiwifruit	●		0.05			
Papaya	●		0.05			
Avocado	●		0.05			
Pineapple	●		0.05			
Guava	●		0.05			
Mango	●		0.05			
Passion fruit	●		0.05			
Date	●		0.05			
Other fruits	●	0.05	0.07		0.05	
Sunflower seeds	●		0.06			
Sesame seeds	●		0.06			
Safflower seeds	●		0.06			
Cotton seeds	●		0.06			
Rapeseeds	●		0.06			
Other oil seeds	●	0.02	0.06		0.02	
Ginkgo nut	●		0.06			
Chestnut	●		0.06			
Pecan	●		0.06			
Almond	●		0.06			
Walnut	●		0.06			
Other nuts	●		0.06			
Tea (non-fermented tea only)			N.D.			
Tea (excluding non-fermented tea)			N.D.			
Tea	○	0.01#				
Coffee beans	●		0.1			
Cacao beans(including shell)			0.1			
Cacao beans						
Hop	●		0.06			
Other spices	●	0.05	0.1		0.05	
Other herbs	○	0.1	0.1		0.1	
Cattle, muscle	●		0.2			
Pig, muscle	●		0.2			
Other terrestrial mammals, muscle	●		0.2			
Cattle, fat	○	0.2	0.2		0.2	
Pig, fat	○	0.2	0.2		0.2	
Other terrestrial mammals, fat	○	0.2	0.2		0.2	
Cattle, liver	●		0.2			
Pig, liver	●		0.2			
Other terrestrial mammals, liver	●		0.2			
Cattle, kidney	●		0.2			

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	National ppm
Pig, kidney	●		0.2			
Other terrestrial mammals, kidney	●		0.2			
Cattle, edible offal	●		0.2			
Pig, edible offal	●		0.2			
Other terrestrial mammals, edible offal	●		0.2			
Milk	○	0.006	0.006		0.006	
Chicken, muscle※1	●		0.2		0.2	
Other poultry, muscle※1	●		0.2		0.2	
Chicken, fat	○	0.2	0.2		0.2	
Other poultry, fat	○	0.2	0.2		0.2	
Chicken, liver	●		0.2			
Other poultry, liver	●		0.2			
Chicken, kidney	●		0.2			
Other poultry, kidney	●		0.2			
Chicken, edible offal	●		0.2			
Other poultry, edible offal	●		0.2			
Chicken eggs	○	0.1	0.1		0.1	
Other poultry, eggs	○	0.1	0.1		0.1	
Cetaceans (such as whale)	○	0.1				
Salmoniformes (such as salmon and trout)	●		0.1			
Anguilliformes (such as eel)	●		0.1			
Perciformes (such as bonito, horse mackerel, mackerel, sea bass, sea bream and tuna)	●		0.1			
Other fish	●	0.01	0.1			
Shelled molluscs	○	0.3	0.1			
Crustaceans	●		0.1			
Other aquatic animals	●		0.1			
Honey (including royal-jelly)	●		0.1			
Mineral waters※2	○	0.00003	0.00003		0.00003	

The residue definition is sum of aldrin and dieldrin.

* The uniform limit 0.01 ppm will be applied to commodities for which draft MRLs are not given in this table and to commodities not listed above.
* Shaded figures indicate provisional MRLs.
* Diagonal line means deletion of a food category to which an MRL applies.
* 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 or deleted.

○：Commodities for which MRLs are to be maintained, increased or newly set.

(#) indicates lower limit of analytical determination.

N.D. : Not detected

※1）Since these substances are highly fat-soluble, MRLs are set only for fat of animals.

※2）MRL for mineral water is based on the WHO Guideline Value for drinking-water. (A guideline value normally represents the concentration of a constituent that does not result in any significant risk to health over a lifetime of consumption.)

Isofetamid

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL		
					Codex ppm	National ppm	
Soybeans, dry	○	0.05	0.05	§			
Beans, dry	○	0.05	0.05	§			
Peas	○	0.05	0.05	§			
Broad beans	○	0.05	0.05	§			
Other pulses	○	0.05	0.05	§			
Cabbage	○	9		Request			
Lettuce (including cos lettuce and leaf lettuce)	○	20	20	§	7		
Onion	○	0.05	0.05	§			
Tomato	○	6		Request			
Egg plant	○	2		Request			
Cucumber (including gherkin)	○	1	1	§			
Melons (whole commodity after removal of stems.)	○	2		Request			
Peas, immature (with pods)	○	20	20	§	0.6		
Kidney beans, immature (with pods)	○	2		IT	0.6	1.50	USA
Green soybeans	○	2		IT	0.6	1.50	USA
Other vegetables	○	2		IT	0.6	1.50	USA
Unshu orange (whole commodity.)	○	7		Request			
Citrus natsudaidai, whole	○	4		Request			
Lemon	○	7		Request			
Orange (including navel orange)	○	7		Request			
Grapefruit	○	7		Request			
Lime	○	7		Request			
Other citrus fruits	○	7		Request			
Apple	○	0.6		IT	0.6	0.60	USA
Japanese pear	○	0.6		IT	0.6	0.60	USA
Pear	○	0.6		IT	0.6	0.60	USA
Quince	○	0.6		IT	0.6	0.60	USA
Loquat (whole commodity after removal of stems.)	○	0.6		IT	0.6	0.60	USA
Peach (whole commodity after removal of stems and stones but the residue calculated and expressed on the whole commodity without stems.)	○	5		Request	3		
Nectarine	○	3		IT	3	3.0	USA
Apricot	○	3		IT	3	0.80	USA
Japanese plum (including prune)	○	0.8		Request・IT	0.8	0.80	USA
Mume plum	○	8		Request	3		
Cherry	○	10		Request	4		
Strawberry	○	7	4	Request	4		
Raspberry	○	4		IT	3	4.0	USA
Blackberry	○	4		IT	3	4.0	USA
Blueberry	○	5	4	IT		5.0	USA
Cranberry	○	5	4	IT	4	5.0	USA
Huckleberry	○	5		IT		5.0	USA
Other berries	○	10	4	IT	4	10.0	USA
Grape	○	10	10	§	3		
Japanese persimmon	○	1		Request	0.6		
Kiwifruit (whole commodity.)	○	10		IT		10.0	USA
Guava	○	5		IT		5.0	USA
Passion fruit	○	10		IT		10.0	USA
Other fruits	○	10		IT		10.0	USA
Sesame seeds	○	0.02		IT		0.015	USA
Rapeseeds	○	0.02		IT	0.01	0.015	USA
Other oil seeds	○	0.02		IT		0.015	USA
Almond	○	0.01			0.01		

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL		
				Codex ppm	National ppm	
Other spices	○ 40		§・Request・IT		0.015	USA
Other herbs	○ 0.02		IT		0.015	USA
Cattle, muscle	○ 0.02			0.02		
Other terrestrial mammals, muscle	○ 0.02			0.02		
Cattle, fat	○ 0.02			0.02		
Other terrestrial mammals, fat	○ 0.02			0.02		
Cattle, liver	○ 0.07			0.07		
Other terrestrial mammals, liver	○ 0.07			0.07		
Cattle, kidney	○ 0.07			0.07		
Other terrestrial mammals, kidney	○ 0.07			0.07		
Cattle, edible offal	○ 0.07			0.07		
Other terrestrial mammals, edible offal	○ 0.07			0.07		
Milk	○ 0.01			0.01		
Chicken, muscle	○ 0.01			0.01		
Other poultry, muscle	○ 0.01			0.01		
Chicken, fat	○ 0.01			0.01		
Other poultry, fat	○ 0.01			0.01		
Chicken, liver	○ 0.01			0.01		
Other poultry, liver	○ 0.01			0.01		
Chicken, kidney	○ 0.01			0.01		
Other poultry, kidney	○ 0.01			0.01		
Chicken, edible offal	○ 0.01			0.01		
Other poultry, edible offal	○ 0.01			0.01		
Chicken eggs	○ 0.01			0.01		
Plum, dried				3		
Raisin				7		
Rapeseed oils, (limited to refined rapeseed oil and rapeseed salad oil that meet the JAS for Edible Vegetable Fats and Oils, and other edible oils that meet standards equivalent to or stricter than JAS)				0.03		

The residue definition for agricultural products is Isofetamid only. The residue definition for animal commodities is sum of isofetamid and metabolite C【2-[3-methyl-4-[2-methyl-2-(3-methylthiophene-2-carboxamido) propanoyl] phenoxy] propanoic acid】, expressed as isofetamid.

* The uniform limit 0.01 ppm will be applied to commodities for which draft MRLs are not given in this table and 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 maintained, increased or newly set. (*It should be noted that the residue definition (for agricultural / animal products) will be changed.)

§：Permitted for use in Japan.

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

IT：Import tolerance

※） Food categories "Plum, dried","Raisin" and "Rapeseed oils, (limited to refined rapeseed oil and rapeseed salad oil that meet the JAS for Edible Vegetable Fats and Oils, and other edible oils that meet standards equivalent to or stricter than JAS)" will be deleted, and hereafter, MRLs in their raw commodities (Japanese plum (including prune), Grape and Rapeseeds) will also apply to such processed commodities, respectively, taking into account their processing factors. For these substances, JMPR estimated processing factors of 4.0 for "Plum, dried (including prune)", 2.3 for "Raisin" and 2 for "Rapeseed oils (limited to refined rapeseed oil and rapeseed salad oil that meet the JAS for Edible Vegetable Fats and Oils, and other edible oils that meet standards equivalent to or stricter than JAS)"

Ipflufenoquin

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	National ppm
Rice (brown rice)	○ 0.4		Request		
Beans, dry	○ 0.05		Request		
Tomato	○ 1		Request		
Pimiento (sweet pepper)	○ 0.7		Request		
Egg plant	○ 0.3		Request		
Cucumber (including gherkin)	○ 0.2		Request		
Unshu orange (whole commodity.)	○ 2		Request		
Citrus natsudaidai, whole	○ 2		Request		
Lemon	○ 2		Request		
Orange (including navel orange)	○ 2		Request		
Grapefruit	○ 2		Request		
Lime	○ 2		Request		
Other citrus fruits	○ 2		Request		
Apple	○ 2		Request		
Japanese pear	○ 2		Request		
Pear	○ 2		Request		
Peach (whole commodity after removal of stems and stones but the residue calculated and expressed on the whole commodity without stems.)	○ 2		Request		
Nectarine	○ 2		Request		
Apricot	○ 5		Request		
Japanese plum (including prune)	○ 0.3		Request		
Mume plum	○ 5		Request		
Cherry	○ 2		Request		
Grape	○ 6		Request		
Japanese persimmon	○ 0.9		Request		
Tea	○ 90		Request		
Other spices	○ 15		Request		
Cattle, muscle	○ 0.01		Request		
Pig, muscle	○ 0.01		Request		
Other terrestrial mammals, muscle	○ 0.01		Request		
Cattle, fat	○ 0.01		Request		
Pig, fat	○ 0.01		Request		
Other terrestrial mammals, fat	○ 0.01		Request		
Cattle, liver	○ 0.02		Request		
Pig, liver	○ 0.02		Request		
Other terrestrial mammals, liver	○ 0.02		Request		
Cattle, kidney	○ 0.01		Request		
Pig, kidney	○ 0.01		Request		
Other terrestrial mammals, kidney	○ 0.01		Request		
Cattle, edible offal	○ 0.02		Request		
Pig, edible offal	○ 0.02		Request		
Other terrestrial mammals, edible offal	○ 0.02		Request		
Milk	○ 0.01		Request		
Chicken, muscle	○ 0.01		Request		
Other poultry, muscle	○ 0.01		Request		
Chicken, fat	○ 0.03		Request		
Other poultry, fat	○ 0.03		Request		
Chicken, liver	○ 0.01		Request		
Other poultry, liver	○ 0.01		Request		
Chicken, kidney	○ 0.01		Request		
Other poultry, kidney	○ 0.01		Request		
Chicken, edible offal	○ 0.01		Request		

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	National ppm
Other poultry, edible offal	○	0.01		Request		
Chicken eggs	○	0.01		Request		
Other poultry, eggs	○	0.01		Request		
Fish	○	0.04		Request		

The residue definition is Ipflufenoquin only.

* The uniform limit 0.01 ppm will be applied to commodities for which draft MRLs are not given in this table and 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 maintained, increased or newly set.

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

1,3-Dichloropropene

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	National ppm
Soybeans, dry	○ 0.01	0.01	§		
Peanuts, dry	○ 0.01	0.01	§		
Potato	○ 0.01	0.01	§		
Taro	○ 0.01	0.01	§		
Sweet potato	○ 0.01	0.01	§		
Japanese yam (including Chinese yam)	○ 0.01	0.01	§		
Konjac	○ 0.01	0.01	§		
Sugar beet	○ 0.01	0.01	§		
Japanese radish, roots (including radish)	○ 0.01	0.01	§		
Japanese radish, leaves (including radish)	○ 0.01	0.01	§		
Turnip, roots (including rutabaga)	○ 0.01	0.01	§		
Turnip, leaves (including rutabaga)	○ 0.01	0.01	§		
Chinese cabbage	○ 0.01	0.01	§		
Cabbage	○ 0.01	0.01	§		
Kale	○ 0.01	0.01	§		
Komatsuna (Japanese mustard spinach)	○ 0.01	0.01	§		
Kyona	○ 0.01	0.01	§		
Qing-geng-cai	○ 0.01	0.01	§		
Cauliflower	○ 0.01		Request		
Broccoli	○ 0.01		Request		
Other cruciferous vegetables	○ 0.01	0.01	§		
Burdock	○ 0.01	0.01	§		
Lettuce (including cos lettuce and leaf lettuce)	○ 0.01	0.01	§		
Other composite vegetables	○ 0.01	0.01	§		
Onion	○ 0.01	0.01	§		
Welsh (including leek)	○ 0.01	0.01	§		
Garlic	○ 0.01	0.01	§		
Nira	○ 0.01	0.01	§		
Multiplying onion (including shallot)	○ 0.01	0.01	§		
Other liliaceous vegetables	○ 0.01	0.01	§		
Carrot	○ 0.01	0.01	§		
Parsley	○ 0.01	0.01	§		
Celery	○ 0.01	0.01	§		
Mitsuba	○ 0.01	0.01	§		
Other umbelliferous vegetables	○ 0.01	0.01	§		
Tomato	○ 0.01	0.01	§		
Pimiento (sweet pepper)	○ 0.01	0.01	§		
Egg plant	○ 0.01	0.01	§		
Other solanaceous vegetables	○ 0.01	0.01	§		
Cucumber (including gherkin)	○ 0.01	0.01	§		
Pumpkin (including squash)	○ 0.01	0.01	§		
Oriental pickling melon (vegetable)	○ 0.01	0.01	§		
Water melon	○ 0.01	0.01	§		
Melons	○ 0.01	0.01	§		
Makuwauri melon	○ 0.01	0.01	§		
Other cucurbitaceous vegetables	○ 0.01	0.01	§		
Spinach	○ 0.01	0.01	§		
Okra	○ 0.01	0.01	§		
Ginger	○ 0.01	0.01	§		
Peas, immature (with pods)	○ 0.01	0.01	§		
Kidney beans, immature (with pods)	○ 0.01	0.01	§		

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	National ppm
Green soybeans	○	0.01	0.01	§		
Other vegetables	○	0.01	0.01	§		
Strawberry	○	0.01	0.01	§		
Other herbs	○	0.01	0.01	§		
Mineral waters	○	0.02	0.02		0.02※	

The residue definition is the sum of E and Z isomers of 1,3-dichloropropene.

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* 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 or deleted.

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§ : Permitted for use in Japan.

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

※The Guideline Value of the WHO Drinking Water Quality Guidelines (Guideline Value: In the WHO drinking water quality guideline set for the purpose of maintaining and improving the quality of drinking water by the regulators and water supply service providers of each country in WHO, drinking water. It is a numerical value that is the basis for evaluating water quality and indicates the concentration that does not cause serious risk to the health of the consumer when ingested over the lifetime.)

Dazomet, Metam and Methyl isothiocyanate

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	National ppm
Potato	○ 0.2	0.2	§		
Taro	○ 0.02	0.02	§		
Sweet potato	○ 0.02	0.02	§		
Japanese yam (including Chinese yam)	○ 0.3	0.3	§		
Konjac	○ 0.05	0.05	§		
Sugar beet	○ 0.02	0.02	§		
Japanese radish, roots (including radish)	● 0.04	0.05	§		
Japanese radish, leaves (including radish)	○ 2	2	§		
Turnip, roots (including rutabaga)	● 0.01	0.02	§		
Turnip, leaves (including rutabaga)	● 0.01	0.02	§		
Chinese cabbage	● 0.01	0.02	§		
Cabbage	○ 0.02	0.02	§		
Kale	○ 0.02		Request		
Komatsuna (Japanese mustard spinach)	○ 0.02	0.02	§ ・ Request		
Kyona	○ 0.3	0.3	§		
Qing-geng-cai	○ 0.1	0.1	§		
Cauliflower	○ 0.01	0.01	§		
Broccoli	○ 0.03	0.03	§		
Other cruciferous vegetables	○ 0.2	0.2	§		
Burdock	○ 0.05	0.05	§		
Shungiku	○ 0.05	0.05	§		
Lettuce (including cos lettuce and leaf lettuce)	○ 0.05	0.05	§		
Other composite vegetables	○ 0.1	0.1	§		
Onion	○ 0.1	0.1	§		
Welsh (including leek)	● 0.02	0.1	§		
Garlic	○ 0.2	0.2	§		
Nira	● 0.02	0.03	§ ・ Request		
Multiplying onion (including shallot)	○ 0.1	0.1	§		
Other liliaceous vegetables	○ 0.1	0.1	§		
Carrot	● 0.05	0.1	§		
Parsley	○ 0.03	0.03	§		
Celery	○ 0.01	0.01	§		
Mitsuba	○ 0.1	0.1	§		
Other umbelliferous vegetables	○ 0.2	0.2	§		
Tomato	○ 0.5	0.5	§		
Pimiento (sweet pepper)	○ 0.1	0.1	§		
Egg plant	○ 0.05	0.05	§		
Other solanaceous vegetables	○ 0.02	0.02	§		
Cucumber (including gherkin)	○ 0.08	0.05	§		
Pumpkin (including squash)	○ 0.1	0.1	§		
Water melon	○ 0.05	0.05	§		
Melons	○ 0.02	0.02	§		
Other cucurbitaceous vegetables	○ 0.1	0.1	§		
Spinach	● 0.1	0.2	§		
Ginger	○ 0.1	0.1	§		
Peas, immature (with pods)	○ 0.1	0.1	§		
Kidney beans, immature (with pods)	○ 0.02	0.02	§		
Green soybeans	○ 0.05	0.05	§		
Other vegetables	○ 0.1	0.1	§		

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
					Codex ppm	National ppm
Strawberry	○	0.02	0.02	§		
Other herbs	○	0.3	0.1	§・Request		

The residue definition is methyl isothiocyanate. It includes methyl isothiocyanate originated from dazomet and metam. The current residue definiton is methyl isothiocyante, dazomet and metam, expressed as methyl isothiocyanate. Metam includes metam-ammonium, metam-sodium and metam-potassium.

* The uniform limit 0.01 ppm will be applied to commodities for which draft MRLs are not given in this table and 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 lowered or deleted.

○: Commodities for which MRLs are to be maintained, increased or newly set. (*It should be noted that the residue definition (for agricultural / animal products) will be changed.)

§ : Permitted for use in Japan.

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

Carbaryl

Commodity		MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL		
					Codex ppm	National ppm	
Rice (brown rice)	○	1	1.0				
Wheat	○	2	2		2		
Barley	●		5				
Rye	●		5				
Corn (maize, including pop corn and sweet corn)	○	0.1	0.1	§	0.1		
Buckwheat	●		3				
Other cereal grains	●		10				
Soybeans, dry	○	0.2	0.2		0.2		
Beans, dry	●		1				
Peas	●		4				
Broad beans	●		4				
Peanuts, dry	●	0.05	5			0.05	USA
Other pulses	●		4				
Potato	●	0.02	0.1	§			
Taro	●		3				
Sweet potato	○	0.02	0.02		0.02		
Japanese yam (including Chinese yam)	●		3				
Konjac	●		3				
Other potatoes	●		3				
Sugar beet	●		0.1				
Sugarcane	●		0.05				
Japanese radish, roots (including radish)	●	0.5	1.0	§			
Japanese radish, leaves (including radish)	●	0.8	1.0	§			
Turnip, roots (including rutabaga)	○	1	1		1		
Turnip, leaves (including rutabaga)	●		10				
Horseradish	●		4				
Watercress	●		10				
Chinese cabbage	●	0.05	1.0	§			
Cabbage	●	0.3	1.0	§			
Brussels sprouts	●		1.0				
Kale	●		10				
Komatsuna (Japanese mustard spinach)	●		10				
Kyona	●		10				
Qing-geng-cai	●		10				
Cauliflower	●		5				
Broccoli	●		6				
Other cruciferous vegetables	●		10				
Burdock	●		3				
Salsify	●		4				
Artichoke	●		3				
Chicory	●		10				
Endive	●		10				
Shungiku	●		10				
Lettuce (including cos lettuce and leaf lettuce)	●		10				
Other composite vegetables	●		10				
Onion	●		3				
Welsh (including leek)	●		3				
Garlic	●		3				
Nira	●		2				
Asparagus	●		15		15		
Multiplying onion (including shallot)	●		3				

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL		
				Codex ppm	National ppm	
Other liliaceous vegetables	●	3				
Carrot	○ 0.5	0.5		0.5		
Parsnip	●	2				
Parsley	○ 22	10			22	USA
Celery	●	5				
Mitsuba	●	1				
Other umbelliferous vegetables	● 0.1	10		0.1		
Tomato	●	5		5		
Pimiento (sweet pepper)	●	5		5		
Egg plant	○ 1	1		1		
Other solanaceous vegetables	● 5	10		5		
Cucumber (including gherkin)	●	3				
Pumpkin (including squash)	●	3				
Oriental pickling melon (vegetable)	○ 3	3			3.0	USA
Water melon	●	2				
Melons	●	3				
Makuwauri melon		3				
Makuwauri melon (whole commodity after removal of stems.)	○ 3				3.0	USA
Other cucurbitaceous vegetables		10				
Other cucurbitaceous vegetables (except Wax gourd)	○ 3				3.0	USA
Spinach	●	1.0				
Bamboo shoots	●	4				
Okra	●	10				
Ginger	● 0.1	2		0.1		
Peas, immature (with pods)	●	5				
Kidney beans, immature (with pods)	●	5				
Green soybeans	●	4				
Button mushroom	●	3				
Shiitake mushroom	●	3				
Other mushrooms	●	3				
Other vegetables	● 0.1	10		0.1		
Unshu orange, pulp		1.0	§			
Unshu orange (whole commodity.)	○ 15		§	15		
Citrus natsudaidai, pulp		1.0				
Citrus natsudaidai, peels		1.0				
Citrus natsudaidai, whole	● 5	7		15		
Lemon	○ 15	7		15		
Orange (including navel orange)	● 5	7		15		
Grapefruit	● 5	7		15		
Lime	○ 15	7		15		
Other citrus fruits		7		15		
Other citrus fruits (except Mandarin)	○ 15			15		
Apple	● 0.05	1.0	§			
Japanese pear	● 0.4	1.0	§			
Pear	● 0.4	5				
Quince	●	5				
Loquat	●	5				
Peach	●	1.0				
Nectarine	○ 10	10			10	USA
Apricot	●	10				
Japanese plum (including prune)	●	10				
Mume plum	●	2				
Cherry	● 7	10			10	USA

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL		
				Codex ppm	National ppm	
Strawberry	●	7				
Raspberry	○ 12	10			12.0	USA
Blackberry	○ 12	10			12.0	USA
Blueberry	● 3	7			3.0	USA
Cranberry	● 5	7		5		
Huckleberry	● 3	7			3.0	USA
Other berries	○ 12	7			12.0	USA
Grape	●	1.0				
Japanese persimmon	●	1.0				
Banana	●	5				
Kiwifruit	●	10				
Papaya	●	4				
Avocado	●	5				
Pineapple	●	2				
Guava	●	3				
Mango	●	3				
Passion fruit	●	3				
Date	●	2				
Other fruits		30		30		
Other fruits (except Fig)	○ 30			30		
Sunflower seeds	○ 0.2	0.2		0.2		
Cotton seeds	●	1				
Rapeseeds	●	0.1				
Other oil seeds	●	5				
Ginkgo nut	○ 1	1		1		
Chestnut	○ 1	1		1		
Pecan	○ 1	1		1		
Almond	○ 1	1		1		
Walnut	○ 1	1		1		
Other nuts	○ 1	1		1		
Tea (limited to unfermented tea)	●	1.0				
Tea (except unfermented tea)	●	1				
Cacao beans (including shell)		0.1				
Cacao beans						
Other spices	○ 80	30	§	15		
Other herbs	○ 75	10		0.1	75	USA
Cattle, muscle	○ 0.05	0.05	§	0.05		
Pig, muscle	○ 0.05	0.05		0.05		
Other terrestrial mammals, muscle	○ 0.05	0.05		0.05		
Cattle, fat	○ 0.1	0.1	§			
Pig, fat	○ 0.1	0.1				
Other terrestrial mammals, fat	○ 0.1	0.1				
Cattle, liver	○ 1	1	§	1		
Pig, liver	○ 1	1		1		
Other terrestrial mammals, liver	○ 1	1		1		
Cattle, kidney	○ 3	3	§	3		
Pig, kidney	○ 3	3		3		
Other terrestrial mammals, kidney	○ 3	3		3		
Cattle, edible offal	○ 3	0.2	§			
Pig, edible offal	○ 3	0.2				
Other terrestrial mammals, edible offal	○ 3	0.2				
Milk	○ 0.05	0.05		0.05		
Chicken, muscle	● 0.2	0.5	§			
Other poultry, muscle	●	0.5				

Commodity	MRL (draft) ppm	MRL (current) ppm	Registration	Reference MRL	
				Codex ppm	National ppm
Chicken, fat	● 3	5	§		
Other poultry, fat	●	5			
Chicken, liver	● 0.01	5	§		
Other poultry, liver	●	5			
Chicken, kidney	● 0.01	5	§		
Other poultry, kidney	●	5			
Chicken, edible offal	● 1	5	§		
Other poultry, edible offal	●	5			
Chicken eggs	● 0.05	0.5			
Other poultry, eggs	●	0.5			
Shelled molluscs	●	0.3			
Rice bran	● 50	170		170	
Milled rice	○ 1	1		1	
Wheat flour (except whole grain)		0.2		0.2	
Wheat germ		1		1	
Wheat bran		2		2	
Corn oil (except edible corn oil that meets the JAS for Edible Vegetable Fats and Oils, and other edible oils that meet standards equivalent to or stricter than JAS)		0.1		0.1	
Soybean oil (except edible soybean oil that meets the JAS for Edible Vegetable Fats and Oils, and other edible oils that meet standards equivalent to or stricter than JAS)		0.2		0.2	
Tomato juice		3		3	
Tomato paste		10		10	
Dried pepper chill				2	
Edible olive oil (limited to virgin oil)		25		25	
Sunflower oil (except refined sunflower oil that meet the JAS for Edible Vegetable Fats and Oils, and other edible oils that meet standards equivalent to or stricter than JAS)	○ 0.05	0.05		0.05	

The residue definition is Carbaryl only.

* The uniform limit 0.01 ppm will be applied to commodities for which draft MRLs are not given in this table and to commodities not listed above.

* Shaded figures indicate provisional MRLs.

* Diagonal line means deletion of a food category to which an MRL applies.

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●：Commodities for which MRLs are to be lowered or deleted.

○：Commodities for which MRLs are to be maintained, increased or newly set.

§：Permitted for use in Japan.

※：Although processed foods; “Wheat flour (except whole grain)”, “ Wheat germ”, "Wheat bran", “Maize oil (crude)”, “Soybean oil (crude)”, “Dried pepper chill” and “Edible olive oil (limited to virgin oil)” have Codex MRLs, respectively, the MRLs won’t be set because each raw commodity MRL isn’t greater than the calculated value by the processing factor. A processed food which doesn’t have MRL will be judged by its raw commodity MRL in consideration of its processing factor.
JMPR estimated processing factors of 0.09 for Wheat flour, 0.49 for Wheat germ, 1 for Wheat bran, 3.3 for crude maize oil, 0.9 for crude soybean oil, 7 for dried peppers chill and 0.82 for edible olive oil.

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.

(2) Establishment and Revision of Analytical Methods for Veterinary Chemicals in Foods

Analytical Method for Dexamethasone and Betamethasone (Targeted to Animal Products)

The target compounds to be determined are dexamethasone and betamethasone.

1. Instrument

Liquid chromatograph-tandem mass spectrometer (LC-MS/MS)

2. Reagents

Use the reagents listed in Section C *Reagents/Test Solutions, Etc*., Part II *Food Additives*, except the following.

Acetonitrile: Use a reagent not containing any substance that may interfere with the analysis of the target compounds.

Ethylenediamine-*N*-propylsilanized silica gel cartridge (1,000 mg) : A polyethylene tube of 12-13 mm in inside diameter packed with 1,000 mg of ethylenediamine-*N*-propylsilanized silica gel, or a cartridge equivalent to the specified one in separation capability.

Ethyl acetate: Use a reagent not containing any substance that may interfere with the analysis of the target compounds.

n-Hexane: Use a reagent not containing any substance that may interfere with the analysis of the target compounds.

Water: Use water suitable for chemical analysis, including distilled water, purified water, or pure water. If it contains any substance that may interfere with the analysis of the target compounds, wash with a solvent such as *n*-hexane before use.

Anhydrous sodium sulfate: Use a reagent not containing any substance that may interfere with the analysis of the target compounds.

3. Reference standard

Reference standard of dexamethasone: Contains not less than 98% of dexamethasone.

Reference standard of betamethasone: Contains not less than 98% of betamethasone.

4. Procedure

a. Extraction

Weigh 10.0 g of sample. Add 50 mL of acetonitrile saturated with *n*-hexane, 50 mL of *n*-hexane and homogenize. Add 20 g of anhydrous sodium sulfate, and homogenize. Centrifuge at 3,000 rpm for 5 minutes, discard the *n*-hexane layer, and collect the acetonitrile layer. Add 50 mL of acetonitrile to the residue, homogenize and centrifuge as described above. Collect the acetonitrile layer, combine the resulting acetonitrile layers, and add acetonitrile to make exactly 100 mL. Take exactly a 50 mL aliquot of the solution, concentrate at below 40ºC, and remove the solvent. Dissolve the residue in 1 mL of ethyl acetate.

b. Clean-up

Add 5 mL of ethyl acetate to an ethylenediamine-*N*-propylsilanized silica gel cartridge (1,000 mg), and discard the effluent. Transfer the solution obtained in "a. Extraction" to the cartridge, add 10 mL of ethyl acetate, and discard the total effluent. Elute with 10 mL of ethyl acetate/methanol (9:1, v/v), concentrate at below 40ºC, and remove the solvent. Dissolve the residue in a mixture of 0.1 vol% acetic acid and 0.1 vol% acetic acid-acetonitrile solution (3:1,v/v) to make exactly 1 mL, and use this solution as the test solution.

5. Measurement

a. Calibration curve

Dissolve separately the reference standards of dexamethasone and betamethasone in acetonitrile to prepare standard stock solutions. Mix each standard stock solution appropriately, dilute with a mixture of 0.1 vol% acetic acid and 0.1 vol% acetic acid-acetonitrile (3:1,v/v), and prepare standard solutions of several concentrations. Inject each standard solution to LC-MS/MS, and make calibration curves by peak-height or peak-area method. When the test solution is prepared following "4. Procedure", the sample containing 0.00005 mg/kg of dexamethasone and betamethasone gives the test solution of 0.00025 mg/L in concentration for each compound.

b. Quantification

Inject the test solution to LC-MS/MS, and calculate the concentrations of dexamethasone and betamethasone from the calibration curves made in "a. Calibration curve".

c. Confirmation

Confirm using LC-MS/MS.

d. Measurement conditions

(Example)

Column: Silica gel bound adamantyl, 2.1 mm in inside diameter, 150 mm in length and 3 μm in particle diameter

Column temperature: 40°C

Mobile phase: Linear gradient from 0.1 vol% acetic acid/0.1 vol% acetic acid-acetonitrile (3:1, v/v) to (7:3, v/v) in 5 min, and from (7:3, v/v) to (1:1, v/v) in 5 min.

Ionization mode: ESI (-)

Major monitoring ions (*m/z*):

Dexamethasone: Precursor ion 451, product ion 361, 307

Betamethasone: Precursor ion 451, product ion 361, 307

Injection volume: 5 μL

Expected retention time:

Dexamethasone: 9 min

Betamethasone: 8 min

6. Limit of Quantification

Dexamethasone: 0.00005 mg/kg

Betamethasone: 0.00005 mg/kg