

Food Safety Regulations Implemented Following the Fukushima Nuclear Accident

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1. One Year Chronology

- 11 March 2011: Fukushima Nuclear Accident
- 17 March 2011: Setting of Provisional Regulation Values by MHLW (Ministry of Health, Labour and Welfare)
(Committed Equivalent Dose to Thyroid of 50 mSv/y for Radioiodines, Committed Effective Dose of 5 mSv/y for Radiocesiums)
- 20 March 2011: Request from MHLW to Food Safety Commission (FSC) for Health Effect Assessment by MHLW
- 29 July 2011: Public Comment for FSC Draft Report (Resulted in 3,089 comments)
- 27 October 2011: Report from FSC, Life time effective dose of approximately 100 mSv + High sensitivity of Infants
- 28 October 2011: Proposal by Minister of MHLW, Committed Effective Dose of 1mSv/y
- 27 December 2011: Advisory to Radiation Council of Japan about New Food Safety Regulation by MHLW
- 6 January 2012: Public Comment for MHLW New Food Safety Regulation (Resulted in 1,877 comments)
- 16 February 2012: Deliberations Radiation Council of Japan about Proposed New Food Safety Regulation
- 24 February 2012: Approved by Radiation Working Group of MHLW
- 1 April 2012 (Schedule): Setting of New Food Safety Regulation Values by MHLW, Committed Effective Dose of 1 mSv/y

2. Provisional Regulation Values (March 2011-)

Radionuclide group	Category of food and water	Provisional regulation value (Bq/kg)
Radioiodine ^a	Water and beverages	300 (100 for infants)
	Milk	300 (100 for infants)
	Vegetables except corms, tubers and roots	2,000
	Aquatic products	2,000
Radiocesium ^b	Water and beverages	200
	Milk	200
	Vegetables	500
	Cereals	500
	Meat, eggs, aquatic products and other foodstuffs	500
Uranium	Infant food	20
	Water and beverages	20
	Milk	20
	Vegetables	100
	Cereals	100
	Meat, eggs, aquatic products and other foodstuffs	100
Plutonium and other transuranic α emitters	Infant food	1
	Water and beverages	1
	Milk	1
	Vegetables	10
	Cereals	10
	Meat, eggs, aquatic products and other foodstuffs	10

The provisional regulation value for radioiodines in seafood was set on 5 April 2011, whereas other values were set on 17 March 2011. These provisional regulation values were effective until 31 March 2012, and new regulation values became available on 1 April 2012. "Milk" here includes cow's milk, powdered milk, human mother's breast milk, daily products and related others. "Vegetables" include mushroom, fruit, edible algae (seaweeds), corms, tubers and roots in addition to vegetables. "Cereals" include grains, rice, pulses and others. "Meat" includes poultry. "Aquatic products" include fish, shellfish and other fishery products. "Other foodstuffs" refer to all foods that do not fall under any categories of milk, vegetables, cereals, meat, eggs and aquatic products. Beware that the provisional regulation values for radioiodines have not been set in cereals, meat, eggs, corms, tubers, roots and the category of "other foodstuffs".

The provisional regulation values are expressed as radioactive concentrations of an indicator radionuclide (¹³¹I) by postulating the relative radioactive concentrations of coexisting radionuclides (¹³²I, ¹³³I, ¹³⁴I, ¹³⁵I and ¹³⁷Cs).

The provisional regulation values are expressed as activity concentrations of indicator radionuclides (¹³⁴Cs and ¹³⁷Cs) by postulating the relative radioactive concentrations of coexisting radionuclides (¹³²Sr and ⁹⁰Sr).

3. Levels of Radioiodines and Radiocesiums in foodstuffs

Monitoring Results of Samples (As of 7 March 2012) on the basis of Provisional Regulation Value

Food	Total No.	Excess No.	Percentage
Food	121,454	1,549	1.30%
Water	78,769	68	0.09%
Total samples	200,223	1,617	0.81%

Categories of water, milk, meat, cereals and other foodstuffs

Category*	Item	Area	Number of samples†	Fully exceeded‡	Marginally exceeded§ (samples data)	Not exceeded¶	Duration (d)‡	Fully exceeded§	Marginally exceeded¶	Not exceeded	Duration (d)‡
Water and beverages	Tap water	Fukushima	41(8)*	3(22.4)*	5(12.2)*	33(79.8)*	1	n.c.	n.c.	n.c.	1
	Chiba	8(2)*	0(0.0)*	0(0.0)*	8(100.0)*	0	n.c.	n.c.	n.c.	n.c.	0
	Banana	13(0)*	0(0.0)*	0(0.0)*	13(100.0)*	0	n.c.	n.c.	n.c.	n.c.	0
Milk	Raw milk	Fukushima	14(0)*	0(0.0)*	0(0.0)*	14(100.0)*	0	n.c.	n.c.	n.c.	0
	Fukushima	18(18)*	1(5.6)*	13(72.2)*	3(16.7)*	7	3(19.2)*	4(22.2)*	11(61.6)*	3(19.2)*	1
	Beef	Fukushima	61(7.8)*	0(0.0)*	0(0.0)*	61(100.0)*	0	3(3.2)*	48(78.7)*	10(16.4)*	264
	Swiss cheese	Fukushima	1(1.2)*	0(0.0)*	0(0.0)*	1(100.0)*	0	4(3.2)*	2(1.6)*	5(4.0)*	96
	Ice-cream	Fukushima	5(2.1)*	0(0.0)*	0(0.0)*	5(100.0)*	0	5(2.1)*	0(0.0)*	0(0.0)*	147
	Wagyu	Fukushima	21(22.2)*	0(0.0)*	0(0.0)*	21(100.0)*	0	5(2.4)*	2(0.9)*	14(6.7)*	249
	Yamagata	Fukushima	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	5(2.2)*	0(0.0)*	0(0.0)*	48
	Alaska	Fukushima	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	7(3.2)*	7(3.2)*	0(0.0)*	21
	Tokyo	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	7(3.2)*	0(0.0)*	0(0.0)*	155
	Vegetarian	Fukushima	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	1(0.5)*	1(0.5)*	0(0.0)*	196
Meat	Wild boar meat	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	12(5.2)*	1(1.1)*	0(0.0)*	23
	Fukushima	11(11.1)*	0(0.0)*	0(0.0)*	11(100.0)*	0	1(0.5)*	1(0.5)*	0(0.0)*	134	
	Beef	Fukushima	8(8.8)*	0(0.0)*	0(0.0)*	8(100.0)*	0	9(7.2)*	1(0.8)*	0(0.0)*	155
	Wild boar meat	Fukushima	5(5.5)*	0(0.0)*	0(0.0)*	5(100.0)*	0	8(5.2)*	1(0.8)*	0(0.0)*	133
	Fukushima	11(11.1)*	0(0.0)*	0(0.0)*	11(100.0)*	0	1(0.5)*	1(0.5)*	0(0.0)*	133	
	Chicken	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	1(0.5)*	0(0.0)*	0(0.0)*	1
	Wild rabbit meat	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	1(0.5)*	0(0.0)*	0(0.0)*	1
	Wild rabbit meat	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	1(0.5)*	0(0.0)*	0(0.0)*	1
	Wild rabbit meat	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	1(0.5)*	0(0.0)*	0(0.0)*	1
	Wild rabbit meat	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	1(0.5)*	0(0.0)*	0(0.0)*	1
Cereals	Brown rice	Fukushima	311	0(0.0)	0(0.0)	311(100.0)	0	7(2.3)	6(1.9)	0(0.0)	1
	Wheat	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	5(2.0)	0(0.0)	0(0.0)	4
	Other foodstuffs	Rice	6(6.6)	0(0.0)	0(0.0)	6(100.0)	0	1(0.5)	1(0.5)	0(0.0)	1
	Rice	Fukushima	13	0(0.0)	0(0.0)	13(100.0)	0	5(4.2)	1(0.8)	0(0.0)	19
	Tokyo	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.5)	0(0.0)	0(0.0)	1
	Beef	Fukushima	2(2.2)	0(0.0)	0(0.0)	2(100.0)	0	5(2.0)	0(0.0)	0(0.0)	1
	Chicken	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	5(2.0)	0(0.0)	0(0.0)	1
	Guinea	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	5(2.0)	0(0.0)	0(0.0)	1
	Kanagawa	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	5(2.0)	0(0.0)	0(0.0)	1
	Tokyo	Fukushima	2(2.2)	0(0.0)	0(0.0)	2(100.0)	0	5(2.0)	0(0.0)	0(0.0)	1
Dried tea leaf	Chiba	Fukushima	2(2.2)	0(0.0)	0(0.0)	2(100.0)	0	6(2.0)	0(0.0)	0(0.0)	36
	Chiba	Fukushima	2(2.2)	0(0.0)	0(0.0)	2(100.0)	0	2(0.8)	0(0.0)	0(0.0)	27
	Saitama	Fukushima	9	0(0.0)	0(0.0)	9(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Chiba	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	2(0.8)	0(0.0)	0(0.0)	14
	Shizuoka	Fukushima	7	0(0.0)	0(0.0)	7(100.0)	0	1(0.4)	0(0.0)	0(0.0)	92
	Saitama	Fukushima	118	0(0.0)	0(0.0)	118(100.0)	0	8(3.4)	1(0.8)	0(0.0)	14
	Chiba	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Maori	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Nagano	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Tokyo	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
Processed tea leaf	Chiba	Fukushima	2(2.2)	0(0.0)	0(0.0)	2(100.0)	0	6(2.0)	0(0.0)	0(0.0)	1
	Chiba	Fukushima	2(2.2)	0(0.0)	0(0.0)	2(100.0)	0	2(0.8)	0(0.0)	0(0.0)	27
	Saitama	Fukushima	9	0(0.0)	0(0.0)	9(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Chiba	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	2(0.8)	0(0.0)	0(0.0)	14
	Shizuoka	Fukushima	7	0(0.0)	0(0.0)	7(100.0)	0	1(0.4)	0(0.0)	0(0.0)	92
	Saitama	Fukushima	118	0(0.0)	0(0.0)	118(100.0)	0	8(3.4)	1(0.8)	0(0.0)	14
	Chiba	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Maori	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Nagano	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Tokyo	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
Reprocessed	Chiba	Fukushima	4(4.4)	0(0.0)	0(0.0)	4(100.0)	0	4(1.6)	0(0.0)	0(0.0)	1
	Chiba	Fukushima	4(4.4)	0(0.0)	0(0.0)	4(100.0)	0	4(1.6)	0(0.0)	0(0.0)	1
	Saitama	Fukushima	18	0(0.0)	0(0.0)	18(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Chiba	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	2(0.8)	0(0.0)	0(0.0)	14
	Shizuoka	Fukushima	7	0(0.0)	0(0.0)	7(100.0)	0	1(0.4)	0(0.0)	0(0.0)	92
	Saitama	Fukushima	118	0(0.0)	0(0.0)	118(100.0)	0	8(3.4)	1(0.8)	0(0.0)	14
	Chiba	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Maori	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Nagano	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
	Tokyo	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1

n.c.: provisional regulation value was not exceeded; n.e.: not examined (see Table 1).
* Shows the food category defined for the provisional regulation values for radioiodines and radiocesiums.
† Presented in the total number of samples exceeding the provisional regulation value for radioiodines and radiocesiums.
‡ Shows the dates when samples were first or lastly exceeded the provisional regulation value was not exceeded.
§ The number of days from the first day when samples exceeded the provisional regulation value to the last day was contained including the initial day.
¶ Shows the number of samples whose values are in parentheses in the number of samples above 100 Bq/kg of ¹³¹I among them.
** Only one sample exceeded the provisional regulation value for radioiodines.
†† Sample from daily units fed to pasture exceeded the provisional regulation value, but those fed to cow barn.
‡‡ Samples were condensed to exceed the provisional regulation value by looking back over the past, because the provisional regulation values (except those for radioiodines in seafood) were set on 17 March 2011.
§§ Sample numbers include different methods for the same cattle. Shows in parentheses are the dates when the first day was reported.
¶¶ Presented are the dates when cattle were slaughtered.
*** MHLW (for water and NRE) (for food) did not set restrictions, but each local governments voluntarily instructed restrictions and recall the most stuffs.
††† Shows in the radiocesium level in the sample from the same lot shipped to France (see Section 4).
§§§ Shows in the English name, Japanese name and scientific name and the scientific name.
||| Shows in the English name, Yama-dai in the Japanese name, and Scientific name in the scientific name.
¶¶¶ Shows in the English name of fishy rubber tree (Ficus elastica) and also called as ficus tree.
†††† Shows in the English name of young leaves of fishy rubber tree (Ficus elastica) and also called as ficus tree.

4. New Regulation Values (April 2012-)

Category	Subcategory	Item	Area	Number of samples	Fully exceeded‡	Marginally exceeded§ (samples data)	Not exceeded¶	Duration (d)‡	Fully exceeded§	Marginally exceeded¶	Not exceeded	Duration (d)‡	
Vegetables	Fresh vegetables	Kakao (leaf) (vegetable belonging to Brassicaceae)	Fukushima	1(1.1)*	0(0.0)*	0(0.0)*	1(100.0)*	0	1(0.4)*	0(0.0)*	0(0.0)*	1	
			Chiba	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	1(0.4)*	0(0.0)*	0(0.0)*	1	
			Saitama	9	0(0.0)	0(0.0)	9(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1	
			Chiba	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	2(0.8)	0(0.0)	0(0.0)	14	
			Shizuoka	7	0(0.0)	0(0.0)	7(100.0)	0	1(0.4)	0(0.0)	0(0.0)	92	
			Saitama	118	0(0.0)	0(0.0)	118(100.0)	0	8(3.4)	1(0.8)	0(0.0)	14	
			Chiba	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1	
			Maori	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
			Nagano	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
			Tokyo	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
Meats, eggs, seafood and others	General foodstuffs	Shungiku (spiral daisy, Helianthus annuus)	Fukushima	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	6(2.0)*	0(0.0)*	0(0.0)*	1	
			Chiba	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	2(0.8)*	0(0.0)*	0(0.0)*	27	
			Saitama	9	0(0.0)	0(0.0)	9(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1	
			Chiba	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	2(0.8)	0(0.0)	0(0.0)	14	
			Shizuoka	7	0(0.0)	0(0.0)	7(100.0)	0	1(0.4)	0(0.0)	0(0.0)	92	
			Saitama	118	0(0.0)	0(0.0)	118(100.0)	0	8(3.4)	1(0.8)	0(0.0)	14	
			Chiba	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1	
			Maori	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
			Nagano	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
			Tokyo	Fukushima	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1
Drinking water	Drinking Water	Sachin (leaf), Lactuca sativa var. angustana	Fukushima	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	6(2.0)*	0(0.0)*	0(0.0)*	1	
			Chiba	2(2.2)*	0(0.0)*	0(0.0)*	2(100.0)*	0	2(0.8)*	0(0.0)*	0(0.0)*	27	
			Saitama	9	0(0.0)	0(0.0)	9(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1	
			Chiba	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	2(0.8)	0(0.0)	0(0.0)	14	
			Shizuoka	7	0(0.0)	0(0.0)	7(100.0)	0	1(0.4)	0(0.0)	0(0.0)	92	
			Saitama	118	0(0.0)	0(0.0)	118(100.0)	0	8(3.4)	1(0.8)	0(0.0)	14	
			Chiba	1(1.1)	0(0.0)	0(0.0)	1(100.0)	0	1(0.4)	0(0.0)	0(0.0)	1	
			Maori	Fukushima	1(1.1)								