

Nuclide Analysis Results of Fish and Shellfish
<Sampled from the Ocean Area within a 20km Radius of the Fukushima Daiichi Nuclear Power Station>
 Samples collected in the fourth quarter of FY2019

[Measurement results of Sr-90 (half-life approx. 29 years) in fish]

Name of Sample (Region)	Place of Sampling (Place No.)	Date of Sampling	Radioactivity Concentration [Bq/kg(Raw)] (Half-life)	
			Sr-90 *1 (Approx. 29 years)	Reference*1 (Sum of Cs-134 and Cs-137)
Ovalipes punctatus (whole) *2	Around 3km Offshore of Ukedo River (T-S3)	January 24, 2020	0.055	11
Microstomus achne (whole) *2	Around 3km Offshore of Fukushima Daiichi (T-S4)	March 17, 2020	0.20	7.4
Searobin (whole) *2	Around 4km Offshore of Kumagawa (T-S8)	January 23, 2020	0.096	6.8
Microstomus achne (whole) *3	Around 4km Offshore of Kumagawa (T-S8)	February 20, 2020	0.19	6.1
Flatfish ② (whole) *3	Around 10km Offshore of Fukushima Daini (T-B4)	February 21, 2020	ND(0.0084)	5.5

*1 Edible parts (muscles) of fish were used to measure Cs. Whole fish (except for internal organs) including bones, which are not edible, were used to measure Sr.
 Reference value (on and after April 1, 2012) Sum of radioactivity concentrations for Cs-134 and Cs-137: 100Bq/kg.

*2 The Sr-90 analysis was conducted by KANSO CO., LTD.

*3 The Sr-90 analysis was conducted by Kyushu Environmental Evaluation Association.

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[Measurement results for Tritium (Half-life: Approx. 12 years) in fish and shellfish]

Place of Sampling(Place No.): Around 4km Offshore of Kumagawa (T-S8)

Name of Sample (Region)	Date of Sampling	Tritium concentration (Bq/L)		Tritium concentration (Bq/kg (Raw))		Reference (Sum of Cs-134 and Cs-137) (Bq/kg (Raw))
		Free Water Tritium	Organically Bound Tritium	Free Water Tritium	Organically Bound Tritium	
Flatfish (muscle)	February 20, 2020	0.065	ND(0.28)	0.052	ND(0.036)	ND
Flatfish (muscle)	March 18, 2020	0.071	ND(0.27)	0.055	ND(0.040)	ND

Reference

	Date of Sampling	Tritium concentration (Bq/L)
Around 4km Offshore of Kumagawa (T-S8) Seawater	January 22, 2020	0.060
	February 19, 2020	0.066
	March 17, 2020	0.071

*Reference value (on and after April 1, 2012) Sum of radioactivity concentrations for Cs-134 and Cs-137: 100Bq/kg.

*The tritium analysis was conducted by Kyushu Environmental Evaluation Association.

*Edible parts (muscles) of fish were used to measure Cs.

*Free Water Tritium means tritium which is contained in the moisture of fish muscles and the values are compared with tritium concentrations in seawater where fish lives.

Organically Bound Tritium means tritium which is contained in dried fish muscles and the values show tritium concentrations in the vapor generated when dried fish is burned.

*The measurement results are rounded to two significant digits.

*ND indicates that a value is less than the detection limit of radioactive concentration. The detection limit is shown in parenthesis.