

OResults of Radioactive Material Monitoring of Aquatic Organisms (Location M off Iwaki City)

<Location M off Iwaki City: Samples collected>

Items	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
M-2	○	○	○	○	○	○

<Location M off Iwaki City: Site measurement item>

Items	Latitude and longitude of the location		Survey date and time			Water	Sediment				Other	
	Latitude	Longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth (m)	Secchi disk depth (m)
M-2(Surface layer)	37.1996°	141.0853°	2019/12/22	08:32	08:45	14.5	12.9	Fine sand	5Y3/2	Shell fragments	42.0	11.5
M-2(Bottom layer)				08:08		13.9						

<Location M off Iwaki City: General survey items/Analysis of radioactive materials Water>

Items	Latitude and longitude of the location		Survey date and time		pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electric conductivity (mS/m)	Salinity	TOC (mg/L)	SS (mg/L)	Turbidity (FNU)	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Sr-90 (Bq/L)
	Latitude	Longitude	Date	Time (water)												
M-2(Surface layer)	37.1996°	141.0853°	2019/12/22	08:32	8.0	0.8	0.8	8.3	5070	34.14	0.8	2	0.4	N.D.(0.0012)	0.0028	-
M-2(Bottom layer)				08:08	8.0	0.7	0.9	8.6	5070	34.17	0.8	2	0.7	N.D.(0.0011)	0.0037	0.0011

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location M off Iwaki City: General survey items/Analysis of radioactive materials Sediment>

Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHE} (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm ³)	Grain size distribution								Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)
	Latitude	Longitude	Date	Time (sediment)							Gravel (2-75mm) (%)	Coarse sand (0.85-2mm) (%)	Medium sand (0.25-0.85mm) (%)	Fine sand (0.075-0.25mm) (%)	Silt (0.005-0.075mm) (%)	Clay (Less than 0.005mm) (%)	Median grain diameter (mm)	Maximum grain diameter (mm)			
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M-2	37.1996°	141.0853°	2019/12/22	08:45	7.7	302	21.6	1.6	1.8	2.776	0.0	0.6	2.0	92.8	3.1	1.5	0.16	2.0	1.3	20	N.D.(0.13)

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location M off Iwaki City: Analysis items Aquatic organisms>

Locations	Sampling point	Latitude and longitude of the location		Sampling date	Division	Class	Order	Family	Scientific name	English name	Population	Sample weight (kg-wet)	Note			Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	
M-1	Offshore of Hisanohama	37.1736°	141.0788°	2019/12/22	Mollusca	Cephalopoda	Octopoda	Oetopodidae	<i>Octopus vulgaris</i>	Common octopus	2	3.4	Imago	-	-	N.D.	N.D.(0.21)	N.D.(0.24)	-
M-2		37.1996°	141.0853°		Vertebrata	Chondrichthyes	Rajiformes	Rajidae	<i>Okamejei kenoei</i>	Common skete	2	1.6	Immature fish	-	-	1.9	N.D.(0.39)	1.9	-
M-3		37.2324°	141.0935°																
M-4	Hisanohama Coastal areas	—	—	2019/12/6	Echinodermata	Holothuroidea	Aspidochirotida	Stichopodidae	<i>Apostichopus japonicus</i>	Japanese common seacucumber	3	0.20	Imago	-	-	24.5	1.5	23	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Hexagrammidae	<i>Hexagrammos agrammus</i>	Hexagrammos agrammus	1	0.10	Immature fish	Amphipod	Viscera removed	0.80	N.D.(0.72)	0.80	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Scorpaenidae	<i>Sebastes cheni</i>	Rockfish	4	0.17	Immature fish	Shrimp,Mysid shrimp,Ragworm,Amphipod	Viscera removed	1.5	N.D.(0.45)	1.5	-

*1: Organisms were collected in or around the targeted water areas.

*2: When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

*3: For a sample made of multiple types of aquatic organisms, the English name of the dominant one largest in number is underlined.

*4: Basically, measurement was conducted for all organism samples. Viscera (stomach and bowels) were removed for the measurement when possible so that undigested food and sediments, etc. in the digestive system would be excluded.

*5: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

*6: River bottom materials (incl. algae) are algae, etc. that were scratched off stones with a brush, etc. and may include very fine particles such as inorganic silt and clay.

*7: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*8: Activity concentrations include counting errors, but the details are omitted here.