

OResults of Radioactive Material Monitoring of Aquatic Organisms (Location F along the Ota River)

< Location F along the Ota River: Samples collected>

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
F-1	○	○	○	○	○	○
F-2	○	○	○	○	○	○
F-3	○	○	○	○	○	○
F-4	○	○	○	○	○	○
F-5	○	○	○	○	○	○
F-6	○	○	○	○	○	○

<Location F along the Ota River: Site measurement item>

Items Locations	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)	Transparency (cm)
F-1	37.597533°	140.925167°	2014/7/8	8:25	8:45	19.8	19.9	Sand	2.5Y4/3	Roots, pebbles	0.56	>50.0
F-2	37.601617°	140.942283°		10:07	9:50	19.8	19.7	Sand	2.5Y4/4	Roots, pebbles	0.54	>50.0
F-3	37.604517°	140.963617°		11:10	11:22	20.0	19.9	Sand	2.5Y4/4	Roots, pebbles	0.73	>50.0
F-4	37.606967°	140.971983°		12:46	13:00	20.1	20.0	Sand	2.5Y4/6	Pebbles	0.62	>50.0
F-5	37.602183°	140.986750°		13:55	14:10	20.6	20.8	Sand	2.5Y3/3	Plant	0.58	>50.0
F-6	37.595333°	141.012300°		15:02	—	21.7	—	—	—	—	—	1.30

<Location F along the Ota River: General survey items/Analysis of radioactive materials Water>

Items Locations	Latitude and longitude of the location		Survey date and time		pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electrical 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)												
F-1	37.597533°	140.925167°	2014/7/8	8:25	7.2	0.9	3.8	9.1	4.3	0.03	1.4	2	1.0	0.13	0.34	—
F-2	37.601617°	140.942283°		10:07	7.1	0.9	3.7	9.2	4.7	0.03	1.4	3	1.2	0.13	0.35	0.0041
F-3	37.604517°	140.963617°		11:10	7.2	0.7	3.9	9.2	4.9	0.03	1.4	4	1.3	0.14	0.36	—
F-4	37.606967°	140.971983°		12:46	7.1	0.7	3.8	9.0	5.1	0.03	1.3	6	1.6	0.14	0.38	—
F-5	37.602183°	140.986750°		13:55	7.1	0.7	4.4	9.2	5.4	0.03	1.4	11	2.3	0.13	0.35	—
F-6	37.595333°	141.012300°		15:02	7.1	1.3	4.6	9.2	8.1	0.05	1.9	6	2.4	0.12	0.32	—

<Location F along the Ota River: General survey items/Analysis of radioactive materials Sediment>

Items Locations	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							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)
F-1	37.597533°	140.925167°	2014/7/8	8:45	6.7	97	20.6	1.8	1.4	2.673	50.4	32.0	9.9	4.1	1.4	2.2	2.0	19	2,300	6,500	—
F-2	37.601617°	140.942283°		9:50	6.8	116	17.0	0.7	0.9	2.663	50.0	34.4	12.6	1.0	0.7	1.3	2.0	9.5	1,200	3,300	0.37
F-3	37.604517°	140.963617°		11:22	6.8	137	17.6	0.8	0.9	2.675	38.6	28.4	22.6	7.2	1.4	1.8	1.4	19	850	2,400	—
F-4	37.606967°	140.971983°		13:00	6.8	166	18.2	0.7	0.7	2.658	39.1	35.6	20.5	3.0	0.2	1.6	1.6	19	650	1,800	—
F-5	37.602183°	140.986750°		14:10	6.6	214	14.6	0.9	0.9	2.688	40.3	21.4	27.6	7.7	1.2	1.8	1.4	9.5	210	570	—

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

<Location F along the Ota River: Survey items Aquatic organisms>

Location	Latitude and longitude of the location		Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note			Cs-134 (Bq/kg-wet)	Cs-137 (Bq/kg-wet)	Sr-90 (Bq/kg-wet)				
	Latitude	Longitude										Growth stage	Stomach contents	Measurement site							
F-1	—	37.597533°	140.925167°	2014/7/1 2014/7/4	Algae/plant	—	—	—	River bottom materials (incl. algae)	Considerable number	0.026	—	—	—	180	510	—				
					Bryopsida	Sphagnopsida	Sphagnales	Sphagnaceae	<i>Sphagnum sp.</i>	Sphagnum	Considerable number	0.31	—	—	—	—	360	970	—		
					Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<u>Macromia amphigena</u>	104	0.030	Larva (dragonfly)	—	—	—	94	310	—		
					Arthropod	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii											
					Arthropod	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	Asiagomphus melaenops											
					Arthropod	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus											
					Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Albardae											
					Arthropod	Malacostraca	Decapoda	Procambarus	<i>Procambarus clarkii</i>	Red swamp crawfish											
					Arthropod	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	3	0.073	Imago	—	—	—	200	570	—		
					Arthropod	Malacostraca	Decapoda	Decapoda	Decapoda	Decapoda	44	0.058	Imago	—	—	—	220	610	—		
					Arthropod	Malacostraca	Decapoda	Atyidae	<i>Atyidae</i>	Freshwater shrimp	335	0.076	Imago	—	—	—	290	790	—		
					Arthropod	Malacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	1	0.064	Imago	—	—	—	300	860	—		
					Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	<i>Semilucospira libertina</i>	Semilucospira libertina	60	0.12	Imago	—	—	—	Molluscan body	52	160	—	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Nipponocypris temminckii</i>	Dark chub	4	0.022	Mature fish (1-year-old)	Terrestrial insects	—	—	—	Viscera removed	130	350	—
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	5	0.037	Mature fish (1-year-old)	Some (details unknown)	—	—	—	Viscera removed	280	790	—
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	10	0.067	Mature fish (1.2-year-old)	Some (details unknown)	—	—	—	Viscera removed	160	420	—
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	2	0.012	Mature fish	—	—	—	—	200	530	—	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Rhinogobius	7	0.022	Mature fish	—	—	—	—	600	1,600	—	
					Vertebrata	Amphibia	Anura	Ranidae	<i>Rana rugosa</i>	Wrinkled Frog	2	0.013	Imago	—	—	—	—	79	190	—	

*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 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: A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

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

*7: 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.

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

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