

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

<Location F along the Ota River: Samples collected>

Items	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
F-1	○	○	○	○	○	○

<Location F along the Ota River: 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)	Transparency (cm)
F-1	37.5975°	140.9252°	2018/9/7	10:00	10:30	20.6	21.1	Sand	2.5Y4/4	None	0.42	>50

<Location F along the Ota River: 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 (nS/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	37.5975°	140.9252°	2018/9/7	10:00	7.5	<0.5	3.1	9.5	5.4	0.03	1.1	1	1.0	0.022	0.21	0.0037

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

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

Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{SHLE} (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)			
F-1	37.5975°	140.9252°	2018/9/7	10:30	7.4	325	19.4	1.3	1.9	2.646	16.1	28.2	47.1	6.8	1.8	0.75	9.5	150	1600	0.64

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

<Location F along the Ota River: 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				
F-1	The main stream of the Ota River	37.5975°	140.9252°	2018/8/29	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0060	-	-	-	256	26	230	-			
					Algae/plant	Zygnemataphyceae	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	-	0.33	-	-	-	5.6	N.D.(1.4)	5.6	-			
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	87	0.031	Larva	-	-	-	232	22	210	-		
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena												
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii												
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Melligomphus viridicostus</i>	Melligomphus viridicostus	38	0.014	Larva(Dragonfly larva)	-	-	-	100	N.D.(14)	100	-		
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae												
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius												
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melanoeps</i>	Asiagomphus melanoeps												
					Arthropoda	Insecta	Megaloptera	Corduliidae	<i>Protohermes grandis</i>	Protohermes grandis	11	0.0045	Larva	-	-	-	54	N.D.(32)	54	-		
					Arthropoda	Insecta	Megaloptera	Corduliidae	<i>Parachauliodes japonicus</i>	Parachauliodes japonicus												
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon pauceidens</i>	Common prawn	7	0.012	Imago	-	-	-	353	23	330	-		
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	102	0.014	Juvenile, Imago	-	-	-	170	20	150	-		
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	2	0.019	Juvenile	-	-	-	348	38	310	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	8	0.021	Immature fish	-	-	-	249	19	230	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsarichthys platypus</i>	Pale chub	3	0.011	Immature fish	-	-	-	184	14	170	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Candidia temminckii</i>	Dark chub	9	0.047	Immature fish	-	-	-	152	12	140	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Cobitis biwae</i>	Cobitis biwae	3	0.0055	Mature fish	-	-	-	130	N.D.(21)	130	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	2	0.010	Mature fish	-	-	-	89	14	75	-		
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	6	0.036	Immature fish	-	-	-	486	36	450	-		
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	Rhinogobius fluviatilis												
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius nagevayae</i>	Rhinogobius nagevayae	8	0.032	Mature fish	-	-	-	578	58	520	-		
										Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.22	-	-	251	21	230
F-5	The main stream of the Ota River	37.6022°	140.9868°	2018/8/29	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	4.3	Mature fish	Obscure digesta	Viscera removed	69.2	6.2	63	1.3			
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	331	0.96	Immature fish	-	-	174	14	160	0.60			

*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.