

OResults 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)
Locations						
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°	2022/6/16	08:55	09:15	15.1	15.3	Sand	5Y4/2	None	0.45	>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	COD	DO	Electric conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (water)		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
F-1	37.5975°	140.9252°	2022/6/16	08:55	7.3	<0.5	2.7	10.4	4.9	0.03	1.1	2	1.0	0.0019	0.063	0.0038

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	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (sediment)		E _{NHLE} (mV)	(%)	(%)	(mg/g-dry)	(g/cm ³)	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	37.5975°	140.9252°	2022/6/16	09:15	7.1	479	19.5	1.4	1.9	2.650	6.4	17.7	44.4	18.7	6.9	5.9	0.44	9.5	11	390	0.54

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°	2022/6/16	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0052	-	-	-	550	N.D.(28)	550	-
					Arthropoda	Insecta	Ephemeroptera	Isonychiidae	<i>Isonychia valida</i>	<i>Isonychia valida</i>	314	0.023	Larva	-	-	120	N.D.(6.9)	120	-
					Arthropoda	Insecta	Ephemeroptera	Siphonuridae	<i>Siphonuridae</i> sp.	Siphonuridae									
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemer a strigata</i>	Mont mayfly									
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	154	0.040	Larva	-	-	130	N.D.(5.0)	130	-
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<i>Macromia amphigena amphigena</i>	56	0.018	Larva (Dragonfly larva)	-	-	35	N.D.(6.1)	35	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	<i>Stylogomphus suzukii</i>									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Meligomphus viridicostus</i>	<i>Meligomphus viridicostus</i>									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<i>Sieboldius albardae</i>									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius</i> sp.	Davidius									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	<i>Asiagomphus melaenops</i>									
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Sympetrum</i> sp.	Sympetrum									
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Orthetrum melania</i>	<i>Orthetrum melania</i>									
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Lyriothemis pachygastra</i>	<i>Lyriothemis pachygastra</i>									
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	<i>Boyeria maclachlani</i>									
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Planaeschna milnei milnei</i>	<i>Planaeschna milnei milnei</i>									
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	<i>Protohermes grandis</i>	56	0.038	Larva	-	-	21	N.D.(4.0)	21	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	123	0.13	Imago	-	-	59	N.D.(1.9)	59	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	534	0.10	Juvenile, Imago	-	-	56	N.D.(2.4)	56	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	19	0.15	Juvenile	-	-	101.4	2.4	99	-
					Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	1	0.13	Immature fish	Empty stomach	Viscera removed	143.6	3.6	140	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	1	0.031	Immature fish	-	-	98	N.D.(7.0)	98	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsarichthys platypus</i>	Pale chub	14	0.069	Immature fish	-	-	83	N.D.(7.1)	83	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Candidia temminckii</i>	Dark chub	36	0.090	Immature fish	-	-	70	N.D.(3.4)	70	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	9.0	Mature fish	Semisulcospira libertina, Corbicula	Viscera removed	123.8	3.8	120	3.3
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Cobitis biwae</i>	<i>Cobitis biwae</i>	10	0.013	Immature fish, Mature fish	-	-	67	N.D.(11)	67	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Lefua echigonia</i>	<i>Lefua echigonia</i>	10	0.016	Immature fish, Mature fish	-	-	69	N.D.(11)	69	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	<i>Rhinogobius fluviatilis</i>	7	0.030	Immature fish, Mature fish	-	-	140	N.D.(9.5)	140	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius nagoyae</i>	<i>Rhinogobius nagoyae</i>									
					Vertebrata	Cephalaspidomorphi	Petromyzontiformes	Petromyzontidae	<i>Lethenteron reissneri</i>	Far eastern brook lamprey	8	0.017	Ammocoetes (larva)	-	-	5.9	N.D.(2.9)	5.9	-
					Vertebrata	Amphibia	Anura	-	-	Frog	42	0.016	Larva(Tadpole)	-	-	270	N.D.(13)	270	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	60	N.D.(1.5)	60	-
F-5	The main stream of the Ota River	37.6022°	140.9868°	2022/6/20	Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	2	0.049	Immature fish	Stenopsyche marmorata	Viscera removed	4.5	N.D.(1.2)	4.5	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	2.6	Mature fish	Obscure digesta	Viscera removed	50.8	1.8	49	1.7
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	65	0.20	Immature fish	-	-	24	N.D.(1.6)	24	-

*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.