

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

<Location F along the Ota River: Samples collected>

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>

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	37.5975°	140.9252°	2016/10/21	07:40	07:50	14.1	14.1	Sand	2.5Y4/2	None	0.41	>50		
F-2	37.6016°	140.9423°		08:53	09:03	14.6	14.9	Sand	2.5Y4/4	None	0.35	>50		
F-3	37.6045°	140.9636°		10:00	10:13	14.5	14.6	Sand	2.5Y4/6	None	0.64	>50		
F-4	37.6070°	140.9720°		11:02	11:18	16.3	14.6	Sand	2.5Y4/6	None	0.45	>50		
F-5	37.6022°	140.9868°		11:55	12:05	17.0	16.6	Sand	2.5Y4/3	None	0.33	>50		
F-6	37.5953°	141.0123°		13:43	-	16.7	-	-	-	-	0.56	>50		

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

Locations	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)												
F-1	37.5975°	140.9252°	2016/10/21	07:40	7.4	0.5	2.3	10.5	4.8	0.03	0.9	1	0.9	0.046	0.25	-
F-2	37.6016°	140.9423°		08:53	7.2	<0.5	2.1	10.4	5.9	0.04	0.8	1	0.7	0.023	0.12	0.0032
F-3	37.6045°	140.9636°		10:00	7.2	<0.5	2.3	10.1	6.0	0.04	0.8	<1	0.7	0.019	0.11	-
F-4	37.6070°	140.9720°		11:02	6.7	<0.5	1.6	8.9	7.2	0.04	0.6	<1	0.6	0.016	0.090	-
F-5	37.6022°	140.9868°		11:55	7.0	0.6	2.0	10.1	7.7	0.04	0.8	<1	1.0	0.015	0.079	-
F-6	37.5953°	141.0123°		13:43	7.0	0.6	2.9	10.8	33.7	0.17	1.2	<1	1.7	0.018	0.10	-

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

Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHLE} (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)
											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°	2016/10/21	07:50	7.1	346	17.3	1.2	1.8	2.629	17.0	28.6	44.7	7.5	1.1	1.1	0.77	9.5	380	2200	-
F-2	37.6016°	140.9423°		09:03	7.1	353	16.3	0.7	1.7	2.629	19.2	38.1	38.2	3.2	0.7	0.6	0.99	9.5	220	1400	0.28
F-3	37.6045°	140.9636°		10:13	7.0	356	20.8	0.6	1.6	2.623	8.8	39.9	46.9	3.7	0.4	0.3	0.83	9.5	230	1400	-
F-4	37.6070°	140.9720°		11:18	6.8	363	18.7	0.5	1.3	2.621	25.7	68.6	5.3	0.3	0.0	0.1	1.5	9.5	100	640	-
F-5	37.6022°	140.9868°		12:05	6.8	361	18.2	1.1	3.0	2.620	30.2	42.2	22.7	4.6	0.2	0.1	1.4	9.5	78	440	-

<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	-	37.5975°	140.9252°	2016/10/21	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.017	-	-	-	2120	320	1800	-			
				2016/10/24	Algae/plant	-	-	-	<i>Bryophyta</i>	Bryophyte	-	0.050	-	-	-	-	1000	150	850	-		
				2016/10/21	Algae/plant	Monocotyledoneae	Poales	Poaceae	<i>Phragmites australis</i>	Common reed	-	0.11	-	-	-	-	1020	150	870	-		
				2016/10/21	Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	41	0.0098	Larva (Dragonfly larva)	-	-	-	-	-	176	26	150	-
				2016/10/21	Arthropoda	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii												
				2016/10/21	Arthropoda	Insecta	Odonata	Gomphidae	<i>Nihonogomphus viridis</i>	Nihonogomphus viridis												
				2016/10/21	Arthropoda	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	Meligomphus viridicostus												
				2016/10/21	Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius												
				2016/10/21	Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	Asiagomphus melaenops												
				2016/10/21	Arthropoda	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani												
				2016/10/21	Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp												
				2016/10/24	Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	30	0.012	Imago	-	-	Molluscos part	267	37	230	-		
				2016/10/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius caviere</i>	Japanese crucian carp	1	0.79	Mature fish	Algae	Viscera removed	410	60	350	-			
				2016/10/21	Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluvialtilis</i>	Rhinogobius fluvialtilis	4	0.011	Mature fish	-	-	407	57	350	-			
				2016/10/21	Vertebrata	Amphibia	Anura	-	-	Frog	4	0.017	Larva (Tadpole)	-	-	2000	300	1700	-			
2016/10/21	Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.19	-	-	-	-	-	141	21	120	-					
F-3	-	37.6045°	140.9636°	2016/10/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Nipponocypris temminckii</i>	Dark chub	6	0.040	Immature fish	-	-	224	34	190	-			
				2016/10/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffi	3	0.0066	Immature fish	-	-	431	71	360	-			

*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.