

Results of Radioactive Material Monitoring of Aquatic Organisms (Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J)

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Samples collected>

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

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: 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)
J-1(Surface layer)	37.4203°	140.1008°	2021/6/12	08:10	08:30	16.6	16.3	Sand gravel	7.5Y 5/3	Shell fragments,Waterweed	3.5	>3.5
J-1(Bottom layer)						16.4						

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: 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)		
J-1(Surface layer)	37.4203°	140.1008°	2021/6/12	08:10	6.9	<0.5	1.8	10.3	12.1	0.06	0.6	<1	0.7	N.D.(0.0014)	0.0048	-
J-1(Bottom layer)					6.8	<0.5	1.8	10.5	12.2	0.06	0.8	<1	0.8	N.D.(0.0014)	0.0051	0.00080

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

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: 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)			
J-1	37.4203°	140.1008°	2021/6/12	08:30	7.0	275	18.8	1.2	2.4	2.730	4.9	18.8	55.0	14.2	3.9	3.2	0.55	9.5	2.3	42	N.D.(0.13)

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

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: 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				
I-1 I-2 (north lakeside)	Within the lake and Nagase River	37.5047° 37.4995°	140.1143° 140.1409°	2021/6/12	Arthropoda	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish	4	0.16	Imago	-	-	-	2.4	N.D.(0.94)	2.4	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	4	0.031	Immature fish	-	-	-	7.4	N.D.(0.93)	7.4	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	20	3.5	Mature fish	Obscure digesta	Viscera removed	17.93	0.93	17	0.20			
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	7	0.068	Immature fish,Mature fish	-	-	-	8.7	N.D.(1.2)	8.7	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	6	1.9	Mature fish	Obscure digesta	Viscera removed	21	N.D.(0.84)	21	0.47			
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	4	4.4	Mature fish	Obscure digesta	Viscera removed	6.8	N.D.(0.74)	6.8	0.43			
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	13	0.11	Immature fish	-	-	-	6.6	N.D.(0.63)	6.6	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	8	1.5	Immature fish,Mature fish	Obscure digesta	Viscera removed	17	N.D.(0.87)	17	0.35			
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	2	3.4	Mature fish	Obscure digesta	Viscera removed	12	N.D.(0.73)	12	0.40			
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	3	0.0043	Immature fish,Mature fish	-	-	-	6.2	N.D.(5.4)	6.2	-		
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	3	0.83	Mature fish	Obscure digesta	Viscera removed	25.4	1.4	24	-			
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Seema	1	0.12	Immature fish	Empty stomach	Viscera removed	18.69	0.69	18	-			
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	0.54	Immature fish	Obscure digesta	Viscera removed	19	N.D.(0.92)	19	-			
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gymnogobius urotaenia</i>	Goby	6	0.050	Immature fish	-	-	-	10	N.D.(0.88)	10	-		
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	3	3.3	Mature fish	Common prawn	Viscera removed	19	N.D.(0.78)	19	0.19			
J-1 (south lakeside)	Within the lake and around the Oninuma	37.4203°	140.1008°	2021/6/12	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.21	-	-	-	-	5.5	N.D.(0.72)	5.5	-		
					Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.011	-	-	-	-	-	N.D.	N.D.(2.9)	N.D.(2.3)	-	
					Algae/plant	Dicotyledoneae	Nymphaeales	Nymphaeaceae	<i>Nuphar japonicum</i>	Cow lily	-	0.31	-	-	-	-	-	-	0.71	N.D.(0.81)	0.71	-
					Algae/plant	Dicotyledoneae	Solanales	Menyanthaceae	<i>Nymphaoides peltata</i>	Fringed water-lily	-	0.31	-	-	-	-	-	-	0.44	N.D.(0.27)	0.44	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	1457	1.2	Imago	-	-	-	-	-	7.5	N.D.(0.89)	7.5	0.60
					Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Cipangopaludina japonica</i>	Japanese mysterysnail	28	0.059	Juvenile	-	-	-	-	-	1.2	N.D.(1.0)	1.2	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsarichthys platypus</i>	Pale chub	2	0.032	Immature fish	-	-	-	-	-	5.0	N.D.(1.5)	5.0	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	4	1.8	Mature fish	Obscure digesta	Viscera removed	21	N.D.(0.74)	21	0.50			
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	5	4.7	Mature fish	Obscure digesta	Viscera removed	25	N.D.(0.82)	25	0.35			
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	13	0.027	Immature fish,Mature fish	-	-	-	-	-	2.1	N.D.(1.7)	2.1	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	1	0.98	Mature fish	Empty stomach	Viscera removed	32	N.D.(1.1)	32	0.075			
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	3	4.6	Mature fish	Fish	Viscera removed	53.2	2.2	51	0.31			
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gymnogobius urotaenia</i>	Goby	6	0.022	Immature fish	-	-	-	-	-	16	N.D.(1.9)	16	-
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.4	Mature fish	Common prawn	Viscera removed	22	N.D.(0.85)	22	0.14			
					Vertebrata	Amphibia	Anura	Glandirana	<i>Glandirana rugosa</i>	Wrinkled frog	5	0.052	Imago	-	-	-	-	-	2.2	N.D.(0.94)	2.2	-
Vertebrata	Amphibia	Anura	Pelophylax	<i>Pelophylax porosus porosus</i>	Tokyo daruma pond frog																	
Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	13	0.065	Imago	-	-	-	-	-	N.D.	N.D.(0.67)	N.D.(0.73)	-					

*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.