

QResults 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 Locations	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 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)	Secchi disk depth (m)
J-1(Surface layer)	37.4203°	140.1008°	2018/5/29	09:30	10:00	14.4	13.5	Sand sediment	7.5Y 5/3	Shells	3.4	>3.4
J-1(Bottom layer)						13.4						

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: General survey items/Analysis of radioactive materials Water>

Items Locations	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°	2018/5/29	09:30	6.5	<0.5	1.4	11.0	10.7	0.06	0.6	<1	0.7	N.D.(0.0013)	0.0066	-
J-1(Bottom layer)					6.6	1.1	1.8	10.7	10.8	0.06	0.9	1	0.8	N.D.(0.0016)	0.0062	0.00086

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 Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _h (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°	2018/5/29	10:00	7.2	314	24.0	1.9	2.5	2.719	0.3	1.7	56.9	33.9	2.6	4.6	0.28	4.8	7.0	80	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°	2018/5/30	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	12	2.3	Mature fish	Obscure digesta	Viscera removed	28.9	2.9	26	0.23				
									<i>Tribolodon hakonensis</i>	Japanese dace	58	2.5	Immature fish, Mature fish	-	-	16.0	1.0	15	0.21				
									<i>Carassius auratus</i>	Carassius auratus langsdorfii	8	2.4	Mature fish	Obscure digesta	Viscera removed	34.8	2.8	32	0.39				
									<i>Hemibarbus barbus</i>	Hemibarbus barbus	2	2.7	Mature fish	Empty stomach	Viscera removed	38.3	3.3	35	0.35				
									<i>Salvelinus leucomaenis</i>	Char	4	1.3	Mature fish	Empty stomach	Viscera removed	39.4	3.4	36	0.11				
									<i>Micropterus dolomieu</i>	Small mouth bass	4	2.6	Immature fish, Mature fish	Common prawn	Viscera removed	27.8	2.8	25	0.23				
									<i>Channa argus</i>	Snakehead	2	1.6	Immature fish	Empty stomach	Viscera removed	19.4	1.4	18	0.30				
									<i>Silurus asotus</i>	Amur catfish	1	0.62	Mature fish	Empty stomach	Viscera removed	22.8	1.8	21	-				
									Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.19	-	-	-	8.52	0.82	7.7	-
									J-1 (south lakeside)	Within the lake and around the Oninuma	37.4203°	140.1008°	2018/5/29	Algae/plant	-	-	-	<i>Spirogyra sp.</i>	Plankton (Planktonic algae)	-	0.014	-	-
<i>Spirogyra</i>	Spirogyra	-	0.31	-	-	-	8.20	0.70										7.5	-				
<i>Nuphar japonicum</i>	Cow lily	-	0.33	-	-	-	0.87	N.D.(0.26)										0.87	-				
<i>Nymphaoides peltata</i>	Fringed water-lily	-	0.35	-	-	-	0.29	N.D.(0.27)										0.29	-				
<i>Epopthalmia elegans</i>	Larva(Dragonfly larva)	-	-	-	-	-	-	-										-	-				
<i>Anotogaster sieboldii</i>	Frosted skimmer	74	0.028	-	-	-	5.0	N.D.(1.7)										5.0	-				
<i>Palaeon paucidens</i>	Common prawn	795	0.49	Imago	-	-	9.56	0.96										8.6	0.66				
<i>Cipangopulidina japonica</i>	Japanese mysterysnail	8	0.055	Imago	-	-	7.9	N.D.(1.3)										7.9	-				
<i>Tribolodon hakonensis</i>	Japanese dace	11	1.3	Mature fish	Obscure digesta	Viscera removed	11.0	1.0										10	0.26				
<i>Carassius auratus</i>	Carassius auratus langsdorfii	3	1.4	Mature fish	Obscure digesta	Viscera removed	25.1	2.1										23	0.39				
<i>Hemibarbus barbus</i>	Hemibarbus barbus	1	1.2	Mature fish	Obscure digesta	Viscera removed	18.7	1.7										17	0.39				
<i>Salvelinus leucomaenis</i>	Char	1	0.12	Mature fish	Japanese smelt	Viscera removed	16.5	1.5										15	-				
<i>Glandirana rugosa</i>	Wrinkled Frog	8	0.071	Imago	-	-	N.D.	N.D.(1.3)										N.D.(1.1)	-				
<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	22	0.11	Imago	-	-	1.3	N.D.(0.71)										1.3	-				

*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.