

OResults of Radioactive Material Monitoring of Aquatic Organisms (Location H in Lake Akimoto)

<Location H in Lake Akimoto: Samples collected>

Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
H-2	○	○	○	○	○	○

<Location H in Lake Akimoto: 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)	Secchi disk depth (m)
H-2(Surface layer)	37.6616°	140.1226°	2019/12/1	09:25	10:20	6.7	7.1	Ooze	7.5Y 5/2	Plant pieces	7.5	2.2
H-2(Bottom layer)						6.4						

<Location H in Lake Akimoto: General survey items/Analysis of radioactive materials Water>

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)		
H-2(Surface layer)	37.6616°	140.1226°	2019/12/1	09:25	7.0	<0.5	4.1	10.6	4.8	0.03	1.8	2	1.9	N.D.(0.0014)	0.0051	-
H-2(Bottom layer)					7.0	<0.5	4.1	11.1	4.9	0.03	1.8	4	2.5	N.D.(0.0014)	0.018	0.0011

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

<Location H in Lake Akimoto: 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)			
											(%)	(%)	(%)	(%)	(%)	(%)	(mm)	(mm)			
H-2	37.6616°	140.1226°	2019/12/1	10:20	6.6	60	73.7	12.3	43.8	2.480	0.3	1.5	2.1	2.2	37.1	56.8	0.0031	4.8	110	1600	1.2

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

<Location H in Lake Akimoto: 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		
H-1 H-2 H-3	In the lake	37.6575° 37.6616° 37.6653°	140.1264° 140.1226° 140.1329°	2019/12/2	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.013	-	-	-	N.D.	N.D.(3.0)	N.D.(2.9)	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	12	2.3	Mature fish	Obscure digesta	Viscera removed	33.9	1.9	32	0.64	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	3	2.4	Mature fish	Obscure digesta	Viscera removed	27.8	1.8	26	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	2	0.67	Immature fish	Obscure digesta	Viscera removed	12.78	0.78	12	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	4	3.8	Mature fish	Obscure digesta	Viscera removed	27.1	2.1	25	1.3	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	25	0.15	Mature fish	-	-	13.87	0.87	13	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	3	0.86	Mature fish	Japanese smelt	Viscera removed	24.5	1.5	23	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Seema	2	0.73	Immature fish	Japanese smelt	Viscera removed	21.9	1.9	20	-	
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	7	2.0	Immature fish, Mature fish	Common prawn	Viscera removed	38.1	2.1	36	-	
H-3	Inflowing rivers	37.6653°	140.1329°	2019/12/2	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.24	-	-	-	-	12.69	0.69	12	-
H-4	Within the lake and rivers in the vicinity	37.6551°	140.1181°	2019/12/2	Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	14	0.020	Larva(Dragonfly larva)	-	-	-	35.7	2.7	33	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur minnow	12	0.031	Immature fish, Mature fish	-	-	-	5.2	N.D.(4.5)	5.2	-

*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.