

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-1	○	○	○	○	○	○
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-1(Surface layer)	37.6575°	140.1264°	2021/8/30	08:53	09:07	22.2	13.7	Ooze	7.5Y6/2	Plant pieces	11.0	4.0
H-1(Bottom layer)						13.2						
H-2(Surface layer)	37.6616°	140.1226°		09:23	09:35	21.4	17.8	Ooze	7.5Y4/2	Plant pieces	5.7	2.5
H-2(Bottom layer)						17.3						

<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 (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)												
H-1(Surface layer)	37.6575°	140.1264°	2021/8/30	08:53	7.4	0.5	4.3	8.5	4.6	0.03	2.0	1	1.2	N.D.(0.0012)	0.0056	-
H-1(Bottom layer)					6.7	<0.5	3.9	4.7	4.2	0.03	1.8	4	2.6	N.D.(0.0014)	0.017	0.0010
H-2(Surface layer)	37.6616°	140.1226°		09:23	7.1	0.9	4.3	8.3	5.2	0.03	1.9	2	1.9	N.D.(0.0013)	0.0080	-
H-2(Bottom layer)					6.6	0.6	6.3	0.7	8.9	0.05	2.2	14	10.2	N.D.(0.0013)	0.017	-

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 _{NH/E} (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-1	37.6575°	140.1264°	2021/8/30	09:07	7.0	126	50.5	9.6	31.8	2.516	0.0	0.0	0.1	0.4	58.0	41.5	0.0070	2.0	29	740	0.70
H-2	37.6616°	140.1226°		09:35	7.1	118	63.7	11.9	38.8	2.429	0.0	0.1	0.2	0.6	44.1	55.0	0.0040	2.0	58	1600	-

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°	2021/8/30	Arthropoda	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish	46	1.6	Imago	-	-	-	22.2	1.2	21	5.5
					Mollusca	Bivalvia	Unionoida	Unionidae	<i>Cristaria plicata</i>	Cristaria plicata	5	1.1	Imago	-	-	Molluscos part	1.2	N.D.(0.61)	1.2	0.081
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	14	3.9	Mature fish	Obscure digesta	Viscera removed	24	N.D.(1.2)	24	0.58	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	6	4.9	Mature fish	Obscure digesta	Viscera removed	24	N.D.(1.5)	24	0.93	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	1	0.17	Immature fish	Obscure digesta	Viscera removed	15	N.D.(1.6)	15	-	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	76	0.45	Mature fish	-	-	7.0	N.D.(1.6)	7.0	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	1	0.22	Mature fish	Empty stomach	Viscera removed	17	N.D.(1.3)	17	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Scema	6	1.7	Immature fish	Japanese smelt	Viscera removed	23	N.D.(1.3)	23	0.23	
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	1	1.3	Mature fish	Empty stomach	Viscera removed	70.2	2.2	68	0.94	
					H-4	Within the lake and rivers in the vicinity	37.6551°	140.1181°	2021/8/30	Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	36	0.027	Larva(Dragonfly larva)	-	-
Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>						Semisulcospira libertina	29	0.026	Juvenile,Imago	-	-	5.6	N.D.(1.4)	5.6	-	
Vertebrata	Amphibia	Anura	Ranidae	<i>Rana ornativentris</i>						Montane brown frog	10	0.092	Imago	-	-	2.8	N.D.(1.7)	2.8	-	
Vertebrata	Amphibia	Anura	Glandirana	<i>Glandirana rugosa</i>						Wrinkled frog										

*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.