

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°	2024/8/28	08:45	08:45	25.7	14.4	Ooze	7.5Y5/3	Plant pieces	12.7	3.1
H-1(Bottom layer)						14.6						
H-2(Surface layer)	37.6616°	140.1226°		09:14	09:27	26.0	17.4	Ooze	7.5Y4/3	None	5.5	3.2
H-2(Bottom layer)						25.1						

<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°	2024/8/28	08:45	7.2	1.0	3.5	8.2	5.8	0.04	1.8	1	1.5	N.D.(0.0012)	0.0081	-
H-1(Bottom layer)					6.6	0.8	3.6	3.9	4.9	0.03	1.7	5	3.3	N.D.(0.0015)	0.0034	0.0010
H-2(Surface layer)	37.6616°	140.1226°		09:14	7.1	0.8	3.5	7.6	5.8	0.04	1.7	2	1.7	N.D.(0.0014)	0.0068	-
H-2(Bottom layer)					7.0	1.0	3.8	7.2	5.6	0.04	1.7	5	2.9	N.D.(0.0014)	0.0066	-

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 _{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)			
H-1	37.6575°	140.1264°	2024/8/28	08:45	6.6	146	69.2	10.8	37.0	2.520	0.0	0.0	0.1	0.9	72.3	26.7	0.011	2.0	17	1300	1.2
H-2	37.6616°	140.1226°		09:27	6.5	132	69.0	15.6	66.0	2.450	0.0	0.0	0.0	0.2	75.9	23.9	0.0086	2.0	4.3	310	-

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°	2024/8/27	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.035	-	-	-	N.D.	N.D.(1.1)	N.D.(0.91)	-	
				2024/8/29	Arthropoda	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish	26	1.0	Imago	-	-	-	15	N.D.(1.4)	15	6.3
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	7	2.0	Mature fish	Obscure digesta	Viscera removed	21	N.D.(1.3)	21	0.65	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorfii</i>	5	2.7	Mature fish	Obscure digesta	Viscera removed	13	N.D.(1.3)	13	0.94	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	<i>Hemibarbus barbus</i>	3	2.8	Mature fish	Obscure digesta	Viscera removed	38.2	1.2	37	1.2	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	19	0.12	Mature fish	-	-	7.0	N.D.(0.85)	7.0	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	2	0.79	Mature fish	Japanese smelt	Viscera removed	17	N.D.(1.4)	17	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Seema	3	0.77	Immature fish	Japanese smelt	Viscera removed	9.5	N.D.(1.1)	9.5	-	
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	4	0.55	Immature fish	Common prawn	Viscera removed	36	N.D.(2.4)	36	-	
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	10	2.4	Immature fish, Mature fish	Common prawn,Rhinogobius,Fish	Viscera removed	20	N.D.(1.2)	20	0.88	
Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	8	0.63	Immature fish, Mature fish	Algae,Stink bug,Common prawn	Viscera removed	15	N.D.(1.4)	15	-						
H-3	Inflowing rivers	37.6650°	140.1392°	2024/8/27	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0069	-	-	-	20	N.D.(5.4)	20	-	
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	74	0.011	Larva	-	-	4.9	N.D.(4.2)	4.9	-	
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	<i>Cottus polux</i>	Japanese fluvial sculpin	17	0.10	Immature fish	-	-	3.9	N.D.(0.59)	3.9	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	112	0.85	Immature fish	-	-	5.2	N.D.(0.87)	5.2	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	5	0.17	Immature fish	Lepidoptera(larva), Aquatic insect	Viscera removed	5.5	N.D.(1.6)	5.5	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	7	0.14	Immature fish	Grasshopper	Viscera removed	6.7	N.D.(1.3)	6.7	-	
H-4	Within the lake and rivers in the vicinity	37.6551°	140.1181°	2024/8/27	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.21	-	-	-	5.1	N.D.(0.33)	5.1	-	
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>	10	0.015	Larva (Dragonfly larva)	-	-	2.5	N.D.(3.1)	2.5	-	
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	<i>Semisulcospira libertina</i>	21	0.023	Imago	-	Molluscous part	5.8	N.D.(1.6)	5.8	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur minnow	4	0.032	Immature fish, Mature fish	-	-	2.8	N.D.(1.8)	2.8	-	
Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	1	0.041	Immature fish	Planaeschna milnei (Dragonfly larva),Ant,Bee	Viscera removed	1.9	N.D.(1.1)	1.9	-						

*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.