

**Results of Radioactive Material Monitoring of Aquatic Organisms (Location G in Lake Hayama)**

<Location G in Lake Hayama: Samples collected>

Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
G-1	○	○	○	○	○	○
G-2	○	○	○	-	○	-

<Location G in Lake Hayama: 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)
G-1(Surface layer)	37.7348°	140.8102°	2020/8/24	11:36	12:00	28.8	27.5	Sand sediment	7.5Y 3/2	Plant pieces	3.3	1.8
G-1(Bottom layer)						28.4						
G-2(Surface layer)	37.7267°	140.8223°		10:00	10:00	10.3	10.3	Sand sediment	7.5Y 4/2	Plant pieces	13.4	3.0
G-2(Bottom layer)						10.9						
G-4	37.7382°	140.8035°	13:00	13:00	24.2	24.2	Sand	7.5Y 5/3	None	0.5	>0.5	

<Location G in Lake Hayama: 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)												
G-1(Surface layer)	37.7348°	140.8102°	2020/8/24	11:36	7.7	0.6	3.9	8.1	7.1	0.04	1.8	3	3.5	N.D.(0.0015)	0.012	-
G-1(Bottom layer)					7.4	0.6	3.7	7.7	7.6	0.04	1.5	5	3.6	0.0020	0.032	0.00062
G-2(Surface layer)	37.7267°	140.8223°		10:00	7.9	0.6	3.5	8.5	6.9	0.04	1.9	1	1.8	N.D.(0.0014)	0.011	-
G-2(Bottom layer)					7.0	1.4	4.0	6.9	6.9	0.04	2.5	2	3.1	N.D.(0.0016)	0.020	-
G-4	37.7382°	140.8035°	13:00	7.8	<0.5	2.3	8.8	7.4	0.04	0.9	<1	0.9	N.D.(0.0014)	0.0099	-	

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

<Location G in Lake Hayama: General survey items/Analysis of radioactive materials Sediment>

Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E <sub>NHE</sub> (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm <sup>3</sup> )	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)
G-1	37.7348°	140.8102°	2020/8/24	12:00	7.4	99	47.5	9.7	26.4	2.598	-	0.0	2.2	42.1	36.7	19.0	0.063	2.0	75	1500	2.3
G-2	37.7267°	140.8223°		10:00	7.3	113	45.6	8.6	23.8	2.614	1.0	1.1	3.8	22.3	46.4	25.4	0.034	19	91	1600	-
G-4	37.7382°	140.8035°		13:00	7.6	476	23.9	2.3	2.9	2.692	18.9	54.6	22.4	2.2	1.9		1.2	9.5	12	210	-

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

<Location G in Lake Hayama: 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	
G-1 G-2 G-3	In the lake	37.7348° 37.7267° 37.7302°	140.8102° 140.8223° 140.8307°	2020/8/24	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.021	-	-	-	N.D.	N.D.(1.9)	N.D.(1.8)	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	0.55	Mature fish	Obscure digesta	Viscera removed	11	N.D.(1.4)	11	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	5	1.8	Immature fish,Mature fish	Obscure digesta	Viscera removed	14	N.D.(0.95)	14	0.51
				2020/8/22	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.3	Mature fish	Cicada,Fish	Viscera removed	147.2	7.2	140	0.89
				2020/8/24	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.4	Mature fish	Shrimp	Viscera removed	147.6	7.6	140	0.87
				2020/8/22	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	28	2.0	Immature fish,Mature fish	Polyzoan,Common pond snail,Algae,Trichoptera(larva),Plant piece,Midge,Stonfly,Worm	Viscera removed	25.4	1.4	24	0.67
				2020/8/24	Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.2	Mature fish	Obscure digesta	Viscera removed	209.2	9.2	200	0.92
G-4	Inflowing rivers	37.7382°	140.8035°	2020/8/7	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0028	-	-	-	140	N.D.(16)	140	-
					Arthropoda	Insecta	Ephemeroptera	Isonychiidae	<i>Isonychia valida</i>	<i>Isonychia valida</i>	747	0.024	Larva	-	-	65	N.D.(5.4)	65	-
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	<i>Protohermes grandis</i>	8	0.0053	Larva	-	-	5.6	N.D.(7.1)	5.6	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur minnow	3	0.013	Immature fish,Mature fish	-	-	11	N.D.(6.2)	11	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	90	1.0	Immature fish	-	-	16.0	1.0	15	0.24
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsariichthys platypus</i>	Pale chub	2	0.025	Immature fish	-	-	25	N.D.(2.2)	25	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Cobitis biwae</i>	Cobitis biwae	2	0.0059	Mature fish	-	-	25	N.D.(15)	25	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	1	0.0042	Immature fish	-	-	20	N.D.(15)	20	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	1	0.019	Immature fish	-	-	26	N.D.(2.1)	26	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	3	4.1	Mature fish	Japanese katydid,Frog,Fish,Isonychia japonica,Shrimp	Viscera removed	127.3	7.3	120	0.76
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	Rhinogobius fluviatilis	10	0.025	Immature fish,Mature fish	-	-	19	N.D.(4.5)	19	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius flumineus</i>	<i>Rhinogobius flumineus</i>									
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.3	Mature fish	Rhaphidophoridae	Viscera removed	211	11	200	0.95
					Vertebrata	Amphibia	Anura	Bufo	<i>Bufo japonicus formosus</i>	Japanese toad	1	0.22	Imago	-	-	274	14	260	-
Coarse Particulate Organic Matter	-	-	-	-	-	-	-	-	Bottom fallen leaves	-	0.21	-	-	-	11	N.D.(1.6)	11	-	

\*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.