

**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	-	○	-	-	○	-
G-3	○	○	○	-	○	-
G-4	-	○	-	-	○	-
G-5	○	○	○	-	○	-

<Location G in Lake Hayama: Site measurement item>

Locations	Latitude and longitude of the location		Survey date and time		Water temperature (degrees C)	Sediment				Other		
	Latitude	Longitude	Date	Time (water)		Time (sediment)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth (m)	Secchi disk depth (m)
G-1(Surface layer)	37.7321°	140.8127°	2016/10/22	13:11	13:25	18.0	16.2	Sand sediment	7.5Y 3/2	Plant pieces	4.8	2.6
G-1(Bottom layer)						17.8						
G-2	37.7267°	140.8223°		-	11:25	-	10.1	Ooze	7.5Y 2/2	Plant pieces	-	-
G-3(Surface layer)	37.7302°	140.8307°		10:40	10:25	17.8	17.4	Sand sediment with gravel	7.5Y 3/2	Plant pieces	6.4	2.5
G-3(Bottom layer)						16.4						
G-4	37.7382°	140.8035°		-	07:50	-	10.2	Sand gravel	7.5Y 5/3	Plant pieces	-	-
G-5(Surface layer)	37.7341°	140.8088°		12:47	12:48	18.0	17.3	Sand sediment	7.5Y 3/2	Plant pieces	1.6	>1.6
G-5(Bottom layer)						17.9						

<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)	37.7321°	140.8127°	2016/10/22	13:11	7.4	1.0	3.9	10.1	7.0	0.04	1.9	2	2.3	0.0057	0.032	-
G-1(Bottom layer)					7.4	0.8	4.1	10.0	6.5	0.04	1.7	3	2.3	0.0048	0.028	0.00096
G-3(Surface layer)	37.7302°	140.8307°		10:40	7.4	0.6	3.6	10.0	6.5	0.04	1.7	2	1.9	0.0034	0.023	-
G-3(Bottom layer)					7.3	0.6	3.7	8.4	6.6	0.04	1.6	2	2.4	0.0048	0.035	-
G-5(Surface layer)	37.7341°	140.8088°		12:47	7.5	0.7	3.9	9.8	6.5	0.04	1.7	2	2.3	0.0040	0.027	-
G-5(Bottom layer)					7.5	1.3	4.3	10.0	6.5	0.04	1.8	2	2.4	0.0045	0.022	-

<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>SHLE</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	37.7321°	140.8127°	2016/10/22	13:25	6.8	253	45.8	6.6	8.8	2.539	0.9	1.2	14.5	56.2	17.9	9.3	0.14	4.8	490	2700	3.1
G-2	37.7267°	140.8223°		11:25	6.7	193	71.7	13.9	39.7	2.377	0.6	1.9	6.9	11.8	32.3	46.5	0.0057	4.8	3100	18000	-
G-3	37.7302°	140.8307°		10:25	6.9	192	53.6	7.8	19.5	2.529	12.2	8.6	13.6	12.3	30.0	23.3	0.058	9.5	580	3500	-
G-4	37.7382°	140.8035°		07:50	7.1	248	17.1	2.3	2.6	2.635	55.9	32.1	4.3	2.8	2.9	2.0	2.2	19	91	560	-
G-5	37.7341°	140.8088°		12:48	7.0	273	42.4	7.2	8.6	2.554	11.6	9.5	38.1	20.6	11.2	9.0	0.33	19	420	2600	-

<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	37.7321° 37.7267° 37.7302°	140.8127° 140.8223° 140.8307°	2016/10/22	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.015	-	-	-	4.6	N.D.(2.2)	4.6	-
				2016/10/6	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	3	0.25	Mature fish	Amorphous Residue	Viscera removed	12.8	1.8	11	-
				2016/10/20	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorffii</i>	2	0.89	Mature fish	Obscure digesta	Viscera removed	65	11	54	-
				2016/10/6	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	3	5.5	Mature fish	Amorphous Residue	Viscera removed	56.7	8.7	48	2.0
				2016/10/3	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.3	Mature fish	Fish	Viscera removed	307	47	260	-
G-4	Inflowing rivers	37.7382°	140.8035°	2016/10/20	Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.9	Mature fish	Empty stomach	Viscera removed	659	99	560	0.49
				Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0076	-	-	-	660	90	570	-	
				Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	35	0.0029	Larva	-	-	326	46	280	-	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	5	0.023	Immature fish	-	-	42.5	5.5	37	-	
				Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.23	-	-	-	75	11	64	-	

\*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.