

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

<Location G in Lake Hayama: Samples collected>

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
G-1	○	○	○	○	○	○
G-4	○	○	○	-	○	-

<Location G in Lake Hayama: Site measurement item>

Items 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)	37.7321°	140.8127°	2018/8/27	11:10	11:50	27.3	25.0	Sand sediment	7.5Y 3/1	Wood chip,Plant pieces	2.7	>2.7		
G-1(Bottom layer)						26.3								
G-4	37.7382°	140.8035°		12:21	13:30	23.4	23.4	Sand	7.5Y 4/2	Plant pieces	0.3	>0.5		

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

Items 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°	2018/8/27	11:10	7.9	1.2	4.6	10.1	6.5	0.04	2.2	1	1.5	0.0021	0.021	-
G-1(Bottom layer)					7.0	0.8	4.2	6.3	7.3	0.04	1.8	4	2.6	0.0030	0.034	0.00099
G-4	37.7382°	140.8035°		12:21	7.4	0.7	2.8	9.2	7.3	0.04	1.3	2	0.8	N.D.(0.0018)	0.016	-

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>

Items Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E <sub>h</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°	2018/8/27	11:50	6.9	356	58.3	14.4	28.6	2.515	0.0	0.0	2.0	41.3	37.1	19.6	0.061	2.0	330	3200	3.2
G-4				37.7382°	140.8035°	13:30	7.3	295	22.2	3.0	3.6	2.690	12.8	23.7	49.8	9.9	0.8	3.0	0.65	19	60

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	37.7321° 37.7267° 37.7302°	140.8127° 140.8223° 140.8307°	2018/8/27	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.012	-	-	-	3.9	N.D.(3.0)	3.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	4	0.15	Immature fish, Mature fish	Obscure digesta	Viscera removed	73.2	7.2	66	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	1	1.7	Mature fish	Obscure digesta	Viscera removed	59.1	5.1	54	1.1
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	0.52	Mature fish	Obscure digesta	Viscera removed	36.9	3.9	33	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	2	2.4	Mature fish	Obscure digesta	Viscera removed	384	34	350	0.80
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	4	0.14	Immature fish	Fish, Shrimp	Viscera removed	44.6	2.6	42	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	3	2.0	Mature fish	Obscure digesta	Viscera removed	286	26	260	0.80
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	12	0.27	Immature fish	Small pondweed, Chironomus, Caddis-fly	Viscera removed	45.1	5.1	40	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	5	0.36	Immature fish, Mature fish	Radix auricularia japonica, Small pondweed	Viscera removed	61.7	5.7	56	-
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.4	Mature fish	Cicada	Viscera removed	242	22	220	0.47
G-4	Inflowing rivers	37.7382°	140.8035°	2018/8/26	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.019	-	-	373	33	340	-	
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	21	0.0052	Larva	-	-	110	N.D.(19)	110	-
					Arthropoda	Insecta	Odonata	Cordulidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	94	0.019	Larva (Dragonfly larva)	-	-	31	N.D.(13)	31	-
					Arthropoda	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Meligomphus viridicostus</i>	Meligomphus viridicostus									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius sp.									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melanocephalus</i>	Asiagomphus melanocephalus									
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Prothemis grandis</i>	Prothemis grandis	16	0.0099	Larva	-	-	9.6	N.D.(5.9)	9.6	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	39	0.0054	Juvenile	-	-	21	N.D.(8.9)	21	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	10	0.23	Immature fish, Mature fish	-	-	38.1	4.1	34	-	
				Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	2	0.11	Mature fish	-	-	23	N.D.(3.2)	23	-	
				2018/8/27	Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	4	0.52	Mature fish	Brachycentridae, Lepidoptera (larva), Ephemera japonica, Millipede, Stink bug	Viscera removed	525	45	480	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	2	0.088	Immature fish	Kanmimaria tibialis, Mont mayfly, Stenopsyche marmorata, Cricotocostella elongatula, Crane fly (imago)	Viscera removed	36	N.D.(4.1)	36	-
				2018/8/26	Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius flumineus</i>	Rhinogobius flumineus	9	0.0068	Immature fish	-	-	24	N.D.(21)	24	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.19	-	-	-	130	10	120	-

\*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.