

**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°	2018/6/1	11:25	11:55	21.9	18.2	Sand sediment	7.5Y 3/1	Plant pieces	3.2	2.5		
G-1(Bottom layer)						18.9								
G-4	37.7382°	140.8035°		13:30	13:55	20.8	20.6	Sand sediment	7.5Y 5/2	Plant pieces	0.3	>0.3		

<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°	2018/6/1	11:25	7.2	0.5	3.6	9.0	7.0	0.04	1.6	5	4.1	0.0046	0.038	-
G-1(Bottom layer)					6.9	<0.5	3.8	7.9	7.1	0.04	1.6	6	4.7	0.0042	0.039	0.0012
G-4	37.7382°	140.8035°		13:30	7.5	<0.5	2.4	9.4	7.6	0.04	1.0	2	1.2	N.D.(0.0014)	0.013	-

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°	2018/6/1	11:55	6.9	91	60.8	11.7	43.8	2.552	0.0	0.1	1.7	24.5	40.0	33.7	0.020	2.0	320	3000	3.4
G-4				37.7382°	140.8035°	13:55	7.2	210	25.7	3.2	3.6	2.692	9.9	24.1	43.7	12.6	3.8	5.9	0.59	19	62

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	In the lake	37.7321°	140.8127°	2018/6/1	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.015	-	-	-	2.3	N.D.(2.6)	2.3	-		
G-2		37.7267°	140.8223°	2018/6/4	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	4	2.6	Mature fish	Fish	Viscera removed	142	12	130	0.91		
G-3		37.7302°	140.8307°		Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	41	0.20	Immature fish	Obscure digesta	Viscera removed	38.4	3.4	35	-		
G-4	Inflowing rivers	37.7382°	140.8035°	2018/6/1	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0053	-	-	-	119.7	9.7	110	-		
					Arthropoda	Insecta	Ephemeroptera	Siphonuridae	<i>Siphonuridae</i>	Siphonuridae	1214	0.020	Larva	-	-	-	-	39.0	4.0	35	-
					Arthropoda	Insecta	Odonata	Cordulidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	47	0.014	Larva(Dragonfly larva)	-	-	18	N.D.(3.1)	18	-		
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii											
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii											
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae											
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius											
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani											
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp											
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	15	0.026	Immature fish	-	-	25.5	2.5	23	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	138	1.3	Immature fish,Mature fish	-	-	33.6	2.6	31	-		
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	75	0.060	Immature fish,Mature fish	-	-	69.5	6.5	63	0.29		
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	10	0.18	Immature fish	Scarabaeidae,Leaf beetle,Tiger beetle,Lepidoptera(larva),Lepidostoma,Goera japonica,Stink bug,Apatania,Ostrovus,Epeorus	Viscera removed	30.1	3.1	27	-		
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	4	0.37	Mature fish	Sieboldius albardae,Japanese dace,Rhinogobius flumineus	Viscera removed	217	17	200	1.1		
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius flumineus</i>	Rhinogobius flumineus	51	0.059	Immature fish,Mature fish	Midge,Simulium vittatum	Viscera removed	29.4	3.4	26	-		
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	3	2.1	Immature fish,Mature fish	Fish	Viscera removed	331	31	300	0.39		
					Vertebrata	Amphibia	Anura	-	-	Frog	8	0.0022	Larva(Tadpole)	-	-	386	56	330	-		
Vertebrata	Amphibia	Anura	Ranidae	<i>Rana ornativentris</i>	Montane brown frog	2	0.024	Imago	-	-	29.9	2.9	27	-							
Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	1	0.0041	Imago	-	-	20	N.D.(15)	20	-							
Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	-	-	-	144	14	130	-				

\*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 organisms 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.