

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

<Location G in Lake Hayama: Samples collected>

Items	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	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°	2017/12/4	11:15	11:30	10.2	8.7	Sand sediment	7.5Y 4/1	Plant pieces	3.5	>3.5
G-1(Bottom layer)						10.0						
G-4	37.7382°	140.8035°	2017/12/4	13:00	13:10	6.4	6.4	Sand sediment	7.5Y 5/3	Plant pieces	0.5	>0.5

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

Items	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°	2017/12/4	11:15	7.4	0.8	3.2	10.4	6.4	0.04	1.6	1	1.3	0.0092	0.080	-
G-1(Bottom layer)					7.3	0.8	3.3	10.1	6.3	0.04	1.6	1	1.3	0.0022	0.016	0.0010
G-4	37.7382°	140.8035°	2017/12/4	13:00	7.4	<0.5	1.8	12.3	6.4	0.05	1.0	<1	0.6	0.0013	0.0097	-

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	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHLE} (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)			
G-1	37.7321°	140.8127°	2017/12/4	11:30	7.2	57	67.8	11.0	32.9	2.554	1.3	7.2	22.5	20.7	27.8	20.5	0.088	9.5	270	2200	2.4
G-4	37.7382°	140.8035°		13:10	7.6	307	27.6	2.5	3.4	2.715	8.6	11.6	42.2	21.3	6.6	9.7	0.38	19	82	680	-

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°	2017/12/4	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.018	-	-	-	5.1	N.D.(1.7)	5.1	-
G-2		37.7267°	140.8223°	2017/12/7	Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	109	0.064	Immature fish	-	-	36.0	6.0	30	-
G-3		37.7302°	140.8307°		Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	1	0.021	Immature fish	Baetidae,Bee	Viscera removed	64.6	6.6	58	-
G-4	Inflowing rivers	37.7382°	140.8035°	2017/12/4	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0087	-	-	-	62.1	7.1	55	-
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera orientalis</i>	Ephemera orientalis	566	0.020	Larva	-	-	98.7	8.7	90	-
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera japonica</i>	Ephemera japonica									
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera strigata</i>	Mont mayfly									
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	89	0.20	Immature fish	-	-	34.1	4.1	30	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	8	0.013	Immature fish,Mature fish	-	-	18	N.D.(2.7)	18	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	1	0.046	Immature fish	Geophilids,Lepidoptera(larva), Tiger beetle,Beetle(larva)	Viscera removed	44.0	5.0	39	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	10	0.13	Immature fish	Locust,Beetle(larva/imago),Ant, Lepidoptera,Diptera(imago),Spiders, Stink bug(larva)	Viscera removed	51.4	5.4	46	-
					Vertebrata	Amphibia	Anura	Ranidae	<i>Rana ornativentris</i>	Montane brown frog	9	0.20	Imago	-	-	439	49	390	-

*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.