

○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			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	37.7342°	140.8098°	2014/10/27	13:51	14:30	17.3	15.5	Sand/sediment	7.5Y3/2	Humus	5.5	2.8	
G-2	37.7254°	140.8215°		—	12:31	—	12.3	—	Ooze	7.5Y3/1	Plant	—	—
G-3	37.7290°	140.8316°		10:31	10:45	17.2	16.2	Sand/gravel/sediment	7.5Y3/1	—	Plant	6.0	2.5
G-4	37.7381°	140.8041°		—	16:05	—	14.1	—	Sand	7.5Y4/3	Plant	—	—
G-5	37.7345°	140.8088°		14:15	14:45	16.9	15.3	Sand/sediment	7.5Y3/2	—	Humus	6.0	2.8

< 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)	Electrical 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												
G-1 (Surface layer)	37.7342°	140.8098°	2014/10/27	13:51	7.8	1.8	5.0	11.3	6.4	0.04	2.1	4	2.1	0.023	0.070	—
G-1 (Deep layer)					7.5	0.8	4.5	9.4	6.6	0.04	2.0	3	1.6	0.025	0.073	0.0012
G-3 (Surface layer)	37.7290°	140.8316°		10:31	7.6	1.9	5.7	10.3	6.6	0.04	2.2	4	1.6	0.021	0.060	—
G-3 (Deep layer)					7.4	0.9	4.1	8.8	6.7	0.04	2.2	2	1.4	0.020	0.060	—
G-5 (Surface layer)	37.7345°	140.8088°		14:15	7.6	1.7	4.9	10.2	6.6	0.04	2.0	4	1.9	0.021	0.057	—
G-5 (Deep layer)			7.4		0.7	3.7	9.2	6.6	0.04	1.9	2	1.5	0.017	0.052	—	

< 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 _{INHE} (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							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	37.7342°	140.8098°	2014/10/27	14:30	6.7	237	82.2	13.0	34.0	2.447	0.0	0.6	4.6	13.5	44.6	36.7	0.012	2	3,400	10,000	4.1
G-2	37.7254°	140.8215°		12:31	6.9	157	77.6	14.6	41.5	2.551	0.3	0.2	0.2	0.5	46.4	52.4	0.0041	4.75	1,800	5,700	—
G-3	37.7290°	140.8316°		10:45	7.1	224	50.3	7.0	23.6	2.651	15.1	9.6	15.1	13.4	18.4	28.4	0.12	19	860	2,700	—
G-4	37.7381°	140.8041°		16:05	7.0	238	35.1	4.8	12.2	2.682	9.9	14.7	40.4	14.9	9.6	10.5	0.40	19	1,100	3,200	—
G-5	37.7345°	140.8088°		14:45	6.8	238	57.6	9.0	15.9	2.610	0.0	7.1	44.4	14.9	10.0	23.6	0.26	2	1,700	5,200	—

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 >

Location	Latitude and longitude of the location		Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note			Cs-134 (Bq/kg-wet)	Cs-137 (Bq/kg-wet)	Sr-90 (Bq/kg-wet)			
	Latitude	Longitude										Growth stage	Stomach contents	Measurement site						
G-4	Inflowing rivers	37.7381°	140.8041°	2014/10/28	Algae/plant	—	—	—	River bottom materials (incl. algae)	Considerable number	0.038	—	—	—	87	280	—			
	Inflowing rivers				Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera strigata</i>	Mont mayfly	607	0.015	Larva	—	—	—	150	450	—		
	Inflowing rivers				Arthropoda	Insecta	Plecoptera	Ephemeropteroidea	<i>Kamimura</i> sp.	Kamimura stonefly genus	366	0.014	Larva	—	—	—	N.D.(4.0)	13	—	
	Inflowing rivers				Arthropod	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii										
	Inflowing rivers				Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzuki</i>	Stylogomphus suzuki										
	Inflowing rivers				Arthropod	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus										
	Inflowing rivers				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius fujama</i>	Davidius fujama										
	Inflowing rivers				Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	albardae	342	0.062	Larva (dragonfly larva)	—	—	—	16	46	—	
	Inflowing rivers				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius nanus</i>	Davidius nanus										
	Inflowing rivers				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius</i> sp.	<i>Davidius</i>										
	Inflowing rivers				Arthropod	Insecta	Odonata	Gomphidae	<i>Sinogomphus flavolimbatus</i>	Sinogomphus flavolimbatus										
	Inflowing rivers				Arthropod	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani										
	Inflowing rivers				Arthropod	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis	41	0.025	Larva	—	—	—	15	42	—	
	Inflowing rivers				Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	157	0.029	Larva	—	—	—	41	100	—	
	Inflowing rivers				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	20	0.017	Immature fish (under 1-year-old)	—	—	—	29	76	—	
	Inflowing rivers				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Scema	1	1.3	Mature fish (3-year-old)	Empty stomach	Viscera removed	140	450	0.33		
	Inflowing rivers				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	2	0.042	Mature fish (1-year-old)	Many unknown content	Viscera removed	14	47	—		
	Inflowing rivers				Vertebrata	Osteichthyes	Perciformes	Gobioidei	<i>Rhinogobius flumineus</i>	Rhinogobius flumineus	12	0.025	Mature fish	—	—	—	12	43	—	
	Inflowing rivers				coarse particulate organic matters (CPOMs)	—	—	—	—	fallen leaves	Considerable number	0.11	—	—	—	—	29	91	—	
	G-1				In the lake	37.7342°	140.8098°	2014/10/27	Algae/plant	—	—	—	Plankton(singular plankter)	Considerable number	0.036	—	—	—	5.6	17
G-2	In the lake	37.7254°	140.8215°	2014/10/28	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	2	0.64	Mature fish (3-year-old)	Many unknown content	Viscera removed	88	260	—		
G-3	In the lake	37.7290°	140.8316°		Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	1	0.44	Mature fish (3-year-old)	Many unknown content	Viscera removed	66	200	—		

*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 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: A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

*6: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

*7: 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.

*8: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*9: Activity concentrations include counting errors, but the details are omitted here.