

**OResults of Radioactive Material Monitoring of Aquatic Organisms (Location H in Lake Akimoto)**

<Location H in Lake Akimoto: Samples collected>

Items	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
H-1	○	○	○	○	○	○
H-2	○	○	○	-	○	-

<Location H in Lake Akimoto: 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)
H-1(Surface layer)	37.6575°	140.1264°	2021/6/11	08:50	09:12	18.8	12.6	Ooze	7.5Y 4/3	Plant pieces	11.0	3.5
H-1(Bottom layer)						13.3						
H-2(Surface layer)	37.6616°	140.1226°		11:30	11:40	19.5	12.8	Ooze	7.5Y 4/2	Plant pieces	6.3	2.5
H-2(Bottom layer)						14.4						

<Location H in Lake Akimoto: 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)												
H-1(Surface layer)	37.6575°	140.1264°	2021/6/11	08:50	7.3	0.5	3.1	10.0	4.1	0.03	1.5	2	1.2	N.D.(0.0014)	0.0041	-
H-1(Bottom layer)					6.9	<0.5	4.1	9.4	4.0	0.03	2.2	2	1.5	N.D.(0.0015)	0.010	0.00096
H-2(Surface layer)	37.6616°	140.1226°		11:30	7.2	0.7	3.4	9.5	4.2	0.03	1.7	2	1.7	N.D.(0.0013)	0.0070	-
H-2(Bottom layer)					6.7	0.5	3.3	8.0	4.8	0.03	1.5	4	2.8	N.D.(0.0013)	0.013	-

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location H in Lake Akimoto: General survey items/Analysis of radioactive materials Sediment>

Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E <sub>NH/E</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)			
H-1	37.6575°	140.1264°	2021/6/11	09:12	6.8	96	51.7	9.7	31.1	2.487	0.0	0.0	0.1	0.4	52.9	46.6	0.0060	0.85	79	1900	1.3
H-2	37.6616°	140.1226°		11:40	6.8	116	63.1	12.9	43.9	2.404	0.3	0.2	0.3	0.5	30.1	68.6	-	9.5	67	1900	-

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location H in Lake Akimoto: 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		
H-1 H-2 H-3	In the lake	37.6575° 37.6616° 37.6653°	140.1264° 140.1226° 140.1329°	2021/6/11	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.014	-	-	-	N.D.	N.D.(2.2)	N.D.(1.9)	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	10	1.8	Mature fish	-	-	-	34	N.D.(1.5)	34	0.56
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	3	2.6	Mature fish	Obscure digesta	Viscera removed	16	N.D.(1.3)	16	0.86	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	4	1.1	Immature fish,Mature fish	Obscure digesta	Viscera removed	18	N.D.(1.3)	18	-	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	39	0.19	Mature fish	-	-	9.8	N.D.(1.4)	9.8	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	4	0.91	Mature fish	-	-	32	N.D.(1.2)	32	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Seema	7	0.59	Immature fish	Japanese smelt, Terrestrial insect, Ephemera orientalis, Ant	Viscera removed	18	N.D.(1.7)	18	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	2	0.20	Immature fish, Mature fish	Japanese smelt, Bee, Terrestrial insect, Ant	Viscera removed	18	N.D.(2.3)	18	-	
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	1	0.048	Immature fish	Empty stomach	Viscera removed	15	N.D.(1.9)	15	-	
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	6	2.2	Immature fish, Mature fish	Ephemera, Gomphidae, Japanese smelt, Terrestrial insect	Viscera removed	43	N.D.(1.6)	43	1.1	
H-3	Inflowing rivers	37.6653°	140.1329°	2021/6/11	Algae/plant	Monocotyledoneae	Alismatales	Hydrocharitaceae	<i>Elodea nuttallii</i>	Western waterweed	-	0.24	-	-	-	41.9	1.9	40	-	
					Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.011	-	-	-	4.0	N.D.(3.6)	4.0	-	
					Arthropoda	Insecta	Plecoptera	Perlidae	<i>Acronetia sp.</i>	Acronetia	84	0.014	Larva	-	-	N.D.	N.D.(2.5)	N.D.(2.0)	-	
					Arthropoda	Insecta	Plecoptera	Perlidae	<i>Calineuria sp.</i>	Calineuria	110	0.044	Larva	-	-	1.3	N.D.(0.95)	1.3	-	
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	64	0.027	Juvenile, Imago	-	-	5.2	N.D.(2.1)	5.2	-	
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	<i>Cottus pollux</i>	Japanese fluvial sculpin	21	0.14	Immature fish	Trichoptera, Terrestrial insect, Ephemerelellidae	Viscera removed	5.0	N.D.(0.60)	5.0	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	1	1.5	Mature fish	Obscure digesta	Viscera removed	14	N.D.(1.3)	14	1.1	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	59	0.11	Immature fish, Mature fish	-	-	6.5	N.D.(1.4)	6.5	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	6	0.29	Immature fish, Mature fish	Japanese smelt, Lepidostoma, Lepidoptera	Viscera removed	13	N.D.(1.1)	13	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	15	0.031	Immature fish	Chironomus, Terrestrial insect	Viscera removed	3.2	N.D.(1.6)	3.2	-	
H-4	Within the lake and rivers in the vicinity	37.6551°	140.1181°	2021/6/11	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	5	0.20	Immature fish	Rhinogobius, Common prawn	Viscera removed	15	N.D.(1.4)	15	-	
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	4	0.092	Immature fish	Terrestrial insect, Anisocentropus immunis	Viscera removed	8.3	N.D.(2.0)	8.3	-	
					Vertebrata	Amphibia	Anura	Rhacophoridae	<i>Buergeria buergeri</i>	Kajika frog	3	0.023	Imago	-	-	21	N.D.(1.3)	21	-	
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.21	-	-	-	10	N.D.(1.4)	10	-	
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera sp.</i>	Ephemera	153	0.0092	Larva	-	-	20	N.D.(2.6)	20	-	
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	38	0.024	Larva (Dragonfly larva)	-	-	49	N.D.(2.1)	49	-	
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	30	0.022	Juvenile, Imago	-	Molluscos part	3.4	N.D.(1.9)	3.4	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur minnow	6	0.041	Immature fish, Mature fish	-	-	3.9	N.D.(1.2)	3.9	-	
					Vertebrata	Amphibia	Anura	-	-	Frog	252	0.21	Larva (Tadpole)	-	-	84.5	3.5	81	-	
					Vertebrata	Amphibia	Anura	Glandirana	<i>Glandirana rugosa</i>	Wrinkled frog	4	0.049	Imago	-	-	3.6	N.D.(1.1)	3.6	-	
Vertebrata	Amphibia	Anura	Pelophylax	<i>Pelophylax porosus porosus</i>	Tokyo daruma pond frog															

\*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.