

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°	2023/6/20	10:15	10:27	20.7	10.8	Ooze	7.5Y3/2	Plant pieces	13.4	3.0
H-1(Bottom layer)				10:19		12.8						
H-2(Surface layer)	37.6616°	140.1226°		11:56	12:06	22.3	11.8	Ooze	7.5Y5/3	None	6.5	2.8
H-2(Bottom layer)						13.9						

<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	COD	DO	Electric conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (water)												
H-1(Surface layer)	37.6575°	140.1264°	2023/6/20	10:15	7.1	1.3	4.0	9.1	4.5	0.03	1.6	3	1.8	N.D.(0.0014)	0.0095	-
H-1(Bottom layer)				10:19	6.9	<0.5	4.0	8.7	4.2	0.03	1.5	2	1.5	N.D.(0.0023)	0.0037	0.00090
H-2(Surface layer)	37.6616°	140.1226°		11:56	7.1	0.8	3.3	9.1	4.5	0.03	1.6	2	1.6	N.D.(0.0013)	0.0022	-
H-2(Bottom layer)					6.7	1.0	3.7	5.1	5.0	0.03	1.6	7	5.3	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 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 _{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)			
H-1	37.6575°	140.1264°	2023/6/20	10:27	7.1	104	53.5	11.4	47.0	2.490	0.0	0.0	0.1	0.5	53.2	46.2	0.0058	2.0	18	990	1.1
H-2	37.6616°	140.1226°		12:06	6.8	100	54.9	14.7	73.0	2.420	0.0	0.0	0.0	0.1	41.9	58.0	0.0035	0.85	5.1	260	-

(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°	2023/6/18	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.026	-	-	-	2.0	N.D.(1.9)	2.0	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Lake prawn	84	0.028	Juvenile,Imago	-	-	N.D.	N.D.(1.7)	N.D.(1.7)	-
				2023/6/20	Arthropoda	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus</i>	Signal crayfish	63	2.5	Imago	-	-	14	N.D.(1.5)	14	6.3
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudaspius hakonensis</i>	Japanese dace	23	3.9	Mature fish	Obscure digesta	Viscera removed	19	N.D.(1.3)	19	0.74
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius</i> sp.	Silver crucian carp	18	4.0	Mature fish	Obscure digesta	Viscera removed	14	N.D.(1.5)	14	1.2
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Barbel steed	4	2.8	Mature fish	Obscure digesta	Viscera removed	17	N.D.(1.2)	17	1.1
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Japanese char	6	2.2	Mature fish	Empty stomach	Viscera removed	19	N.D.(1.3)	19	0.33
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Cherry salmon	3	0.91	Immature fish	Empty stomach	Viscera removed	16	N.D.(1.5)	16	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu dolomieu</i>	Smallmouth bass	7	1.6	Immature fish	<i>Palaemon paucidens</i> ,Plant pieces	Viscera removed	20	N.D.(1.3)	20	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus macrochirus</i>	Bluegill	3	0.44	Mature fish	Terrestrial insect, <i>Palaemon pauciden s</i> ,Ant	Viscera removed	13	N.D.(1.7)	13	-
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	0.81	Mature fish	Empty stomach	Viscera removed	37	N.D.(1.3)	37	-
					Algae/plant	-	-	-	-	Sediment deposited on riverbed (Including algae)	-	0.0046	-	-	-	14	N.D.(6.8)	14	-
H-3	Inflowing rivers	37.6653°	140.1329°	2023/6/18	Algae/plant	-	-	-	-	-	-	0.0046	-	-	-	-	-	-	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	<i>Cottus pollux</i>	Japanese fluvial sculpin	11	0.089	Immature fish	-	-	3.7	N.D.(0.51)	3.7	-
				2023/6/19	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudaspius hakonensis</i>	Japanese dace	2	0.036	Immature fish	-	-	13	N.D.(2.9)	13	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Japanese char	12	0.36	Immature fish	Phryganeidae,Spiders,Chironomidae	Viscera removed	4.1	N.D.(0.35)	4.1	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Masu salmon	7	0.024	Immature fish	-	-	3.7	N.D.(2.5)	3.7	-
					Vertebrata	Amphibia	Anura	Rhacophoridae	<i>Buergeria buergeri</i>	Kajika frog	2	0.0073	Imago	-	-	34	N.D.(12)	34	-
H-4	Within the lake and rivers in the vicinity	37.6551°	140.1181°	2023/6/18	Coarse Particulate Organic Matter	-	-	-	-	Water-bottom leaf litter	-	0.22	-	-	-	4.1	N.D.(0.62)	4.1	-
					Arthropoda	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Jumbo dragonfly	24	0.022	Larva (Dragonfly larva)	-	-	4.0	N.D.(1.5)	4.0	-
				2023/6/18	Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	Freshwater snail	30	0.032	Juvenile,Imago	-	Molluscos part	3.3	N.D.(1.3)	3.3	-
					Vertebrata	Amphibia	Anura	-	Amphibia	Frog	149	0.047	Larva(Tadpole)	-	-	5.9	N.D.(1.3)	5.9	-
					Vertebrata	Amphibia	Anura	Ranidae	<i>Rana ornativentris</i>	Montane brown frog	2	0.037	Imago	-	-	20	N.D.(2.7)	20	-
					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.