

○Results of Radioactive Material Monitoring of Aquatic Organisms (Location H in Lake Akimoto)

< Location H in Lake Akimoto: Samples collected >

Locations	Items	General items		Radioactive materials		
		Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)
H-1		○	○	○	—	—
H-2		—	○	—	—	○
H-3		○	○	○	○	○
H-4		—	○	—	—	○
H-5		○	○	○	—	—

< Location H in Lake Akimoto: Site measurement item >

Locations	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		37.6579°	140.1277°	2014/10/21	9:00	9:16	15.0	12.9	Ooze	7.5Y4/1	Plant	11.8	2.9
H-2		37.6623°	140.1227°		—	10:12	—	13.8	—	7.5Y4/1	None	—	—
H-3		37.6644°	140.1308°		9:30	9:45	14.9	14.8	Sand/sediment	7.5Y3/2	Plant	6.0	2.6
H-4		37.6540°	140.1181°		—	10:24	—	14.5	—	7.5Y4/2	Plant	—	—
H-5		37.6532°	140.1537°		8:23	8:42	14.3	13.9	Sand/sediment	7.5Y4/2	Plant	8.2	2.9

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

Locations	Items	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												
H-1 (Surface layer)		37.6579°	140.1277°	2014/10/21	9:00	7.5	0.8	3.8	9.8	5.0	0.03	1.8	1	1.6	0.0041	0.014	—
H-1 (Deep layer)					7.2	0.7	3.2	8.5	5.1	0.03	1.7	1	1.8	0.0092	0.029	—	
H-3 (Surface layer)		37.6644°	140.1308°		9:30	7.4	1.5	4.3	9.7	5.8	0.03	2.1	4	2.2	0.016	0.050	—
H-3 (Deep layer)					7.3	0.8	3.8	9.1	5.0	0.03	1.8	2	1.7	0.0092	0.027	0.0014	
H-5 (Surface layer)		37.6532°	140.1537°		8:23	7.3	1.6	4.8	8.7	5.3	0.03	2.9	2	1.8	0.011	0.034	—
H-1 (Deep layer)				7.1	1.1	4.1	8.4	5.2	0.04	2.3	2	2.0	0.0049	0.019	—		

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

Locations	Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHE} (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)
H-1		37.6579°	140.1277°	2014/10/21	9:16	6.8	210	63.9	8.8	21.6	2.594	0.0	0.3	0.1	0.3	58.3	41.0	0.0079	2	3.8	24	—
H-2		37.6623°	140.1227°		10:12	6.8	197	74.8	13.8	47.7	2.457	0.0	0.0	0.3	0.1	46.7	52.9	0.0044	2	200	710	—
H-3		37.6644°	140.1308°		9:45	6.5	206	74.6	16.7	61.8	2.427	0.0	0.1	0.2	11.8	59.6	28.3	0.018	2	740	2,200	1.7
H-4		37.6540°	140.1181°		10:24	6.8	202	66.7	8.9	28.0	2.565	0.0	0.2	0.5	4.1	43.2	52.0	0.0043	2	150	490	—
H-5		37.6532°	140.1537°		8:42	6.7	212	51.4	5.8	13.0	2.646	0.0	0.1	7.0	42.6	32.1	18.2	0.074	2	91	220	—

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 >

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						
H-1 H-2 H-3 (Including the Nakatsu River area) Near the h-4	In the lake	37.6579° 37.6623° 37.6644° 37.6540°	140.1277° 140.1227° 140.1308° 140.1181°	2014/10/21	Algae/plant	—	—	—	—	Plankton(singular plankter)	Considerable number	0.010	—	—	—	7.7	25	—		
	In the lake				Angiospermae	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	<i>Elodea nuttallii</i>	Western Waterweed	Considerable number	0.19	—	—	—	—	1.8	5.9	—	
	Inflowing rivers				Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera japonica</i>	<i>Ephemera japonica</i> McLachlan	489	0.026	Larva	—	—	—	29	93	—	
	Inflowing rivers				Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera strigata</i>	Mont mayfly										
	In the lake				Arthropod	Insecta	Odonata	Cordulegasteridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	96	0.12	Larva (dragonfly larva)	—	—	—	7.0	21	—	
	In the lake				Arthropod	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish	43	2.1	Imago	—	—	—	8.9	28	7.8	
	In the lake				Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	210	0.15	Imago	—	—	Molluscan body	6.9	22	—	
	In the lake				Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	101	0.34	Mature fish	—	—	—	4.8	16	—	
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	42	0.058	Mature fish	—	—	—	3.2	9.7	—	
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	20	4.8	Mature fish	Green algae	—	—	Viscera removed	17	57	0.73
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	12	1.7	Mature fish (5-year-old)	—	—	—	Viscera removed	14	42	1.3
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	4	2.7	Mature fish (4-year-old)	—	—	—	Viscera removed	6.5	23	1.2
	In the lake				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	5	1.7	Mature fish (4-year-old)	Fish	—	—	Viscera removed	10	34	—
	In the lake				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	8	3.2	Mature fish (3-year-old)	Cordulegasteridae	—	—	Viscera removed	13	45	1.0
	In the lake				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	6	0.46	Mature fish (3-year-old)	Ephemeroptera	—	—	Viscera removed	7.6	25	—
	In the lake				Vertebrata	Amphibia	Anura	Ranidae	<i>Rana rugosa</i>	Wrinkled Frog	5	0.026	Imago	—	—	—	3.2	12	—	
	In the lake				Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	3	0.015	Imago	—	—	—	2.8	5.7	—	
Inflowing rivers	coarse particulate organic matters (CPOMs)	—	—	—	—	—	—	—	Fallen leaves	Considerable number	0.14	—	—	—	17	55	—			

*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.