

OResults of Radioactive Material Monitoring of Aquatic Organisms (Location L off Soma City)

<Location L off Soma City: Samples collected>

Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
L-2	○	○	○	○	○	○

<Location L off Soma City: 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)
L-2	37.8155°	140.9763°	2023/8/28	11:18	11:35	26.3	26.6	Sand with silt	5Y3/1	Shells	1.7	0.8

<Location L off Soma City: General survey items/Analysis of radioactive materials Water>

Locations	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)		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
L-2	37.8155°	140.9763°	2023/8/28	11:18	8.0	1.4	3.6	7.4	4750	33.12	1.6	20	10.2	N.D.(0.0014)	0.013	0.00078

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

<Location L off Soma City: General survey items/Analysis of radioactive materials Sediment>

Locations	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 (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)			
L-2	37.8155°	140.9763°	2023/8/28	11:35	7.9	53	28.5	3.3	5.1	2.690	0.4	0.7	16.7	61.0	13.8	7.4	0.14	4.8	1.5	94	N.D.(0.12)

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

<Location L off Soma City: 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	
L-1 L-2 L-3	Matsukawaura Lagoon	37.8210° 37.8155° 37.8217°	140.9610° 140.9763° 140.9765°	2023/8/28	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.036	-	-	-	1.4	N.D.(1.4)	1.4	-
					Algae/plant	Monocotyledoneae	Najadales	Zosteraceae	<i>Zostera marina</i>	Eel grass	-	0.28	-	-	-	0.99	N.D.(0.30)	0.99	-
					Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae	Lumbrineridae	72	0.035	Juvenile,Imago	-	-	N.D.	N.D.(1.1)	N.D.(1.0)	-
					Annelida	Polychaeta	Phyllodocida	Nereididae	<i>Ceratonereis erythraeensis</i>	Ceratonereis									
					Annelida	Polychaeta	Spionida	Cirratulidae	Cirratulida	Cirratulidae									
					Arthropoda	Malacostraca	Decapoda	Alpheidae	Alpheidae	Alpheidae									
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon</i> sp.	Lake prawn	65	0.078	Juvenile	-	-	1.1	N.D.(0.50)	1.1	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Hemigrapsus</i> sp.	Japanese shore crab	268	0.20	Imago	-	-	0.65	N.D.(0.32)	0.65	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	181	0.40	Juvenile,Imago	-	-	1.2	N.D.(0.19)	1.2	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	2	0.055	Juvenile	-	-	1.6	N.D.(0.83)	1.6	-
					Mollusca	Bivalvia	Veneroida	Veneridae	<i>Ruditapes philippinarum</i>	Japanese littleneck	78	0.60	Imago	-	Molluscous part	0.55	N.D.(0.31)	0.55	-
					Vertebrata	Osteichthyes	Perciformes	Lateolabracidae	<i>Lateolabrax japonicus</i>	Japanese sea bass	12	0.31	Immature fish	-	-	0.75	N.D.(0.29)	0.75	-
					Vertebrata	Osteichthyes	Perciformes	Sparidae	<i>Acanthopagrus schlegelii</i>	Japanese black porgy	5	0.15	Immature fish	Crustacea	Viscera removed	0.71	N.D.(0.32)	0.71	-
					Vertebrata	Osteichthyes	Perciformes	Pholidae	<i>Pholis crassispina</i>	Pholis	14	0.033	Immature fish, Mature fish	-	-	N.D.	N.D.(1.5)	N.D.(1.3)	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Tridentiger trigonocephalus</i>	Chameleon goby	304	0.50	Immature fish, Mature fish	-	-	0.34	N.D.(0.25)	0.34	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Acanthogobius lactipes</i>	Whitelimbed goby									
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Acentrogobius virgatus</i>	Streaked goby									
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Tridentiger obscurus</i>	Dusky tripletooth goby									
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gobiidae</i>	<i>Gobiidae</i>									
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Favonigobius gymnauchen</i>	Sharp-nosed sand goby									
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Acanthogobius flavimanus</i>	Yellowfin Goby	9	0.15	Immature fish, Mature fish	-	-	0.74	N.D.(0.31)	0.74	-
					Vertebrata	Osteichthyes	Perciformes	Mugilidae	<i>Mugil cephalus cephalus</i>	Flathead grey mullet	8	0.010	Immature fish	-	-	6.9	N.D.(3.8)	6.9	-
Vertebrata	Osteichthyes	Tetraodontiformes	Tetraodontidae	<i>Takifugu alboplumbeus</i>	Grass puffer	3	0.082	Immature fish, Mature fish	-	-	0.68	N.D.(0.50)	0.68	-					

*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.