

Results 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°	2020/8/25	09:14	09:37	26.7	26.8	Sand	5Y 3/2	Shell fragments	1.8	>1.8

<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 (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)												
L-2	37.8155°	140.9763°	2020/8/25	09:14	8.0	0.9	2.5	7.1	4520	29.43	1.3	3	1.2	N.D.(0.0012)	0.0047	0.00089

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)
											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°	2020/8/25	09:37	7.7	324	18.8	1.2	2.4	2.747	2.7	4.6	61.2	29.2	2.3	0.31	9.5	1.1	21	N.D.(0.13)	

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°	2020/8/7	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.013	-	-	-	3.0	N.D.(3.0)	3.0	-		
				2020/8/25	Algae/plant	Monocotyledoneae	Najadales	Zosteraceae	<i>Zostera marina</i>	Eel grass	-	0.27	-	-	-	-	0.59	N.D.(0.29)	0.59	-	
				2020/8/5	Annelida	Polychaeta	Eunicida	Lumbrineridae	<i>Lumbrineridae</i>	Lumbrineridae	251	0.14	Juvenile,Imago	-	-	-	-	1.8	N.D.(0.41)	1.8	-
					Annelida	Polychaeta	Phyllodocida	Nereididae	<i>Nereididae</i>	Nereididae											
					Annelida	Polychaeta	Spionida	Cirratulidae	<i>Cirratulida</i>	Polychaeta											
				2020/8/12	Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Hemigrapsus sp.</i>	Hemigrapsus	25	0.053	Juvenile,Imago	-	-	-	2.4	N.D.(0.86)	2.4	-	
					Arthropoda	Malacostraca	Decapoda	Portunidae	<i>Charybdis japonica</i>	Shore swimming crab	19	0.99	Juvenile,Imago	-	-	-	0.92	N.D.(0.45)	0.92	0.055	
				2020/8/5	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Ruditapes philippinarum</i>	Japanese littleneck	85	0.15	Juvenile,Imago	-	Molluscos part	-	4.2	N.D.(0.40)	4.2	-	
					Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	<i>Paralichthys olivaceus</i>	Bastard halibut	1	0.014	Immature fish	-	-	-	N.D.	N.D.(4.3)	N.D.(3.6)	-	
					Vertebrata	Osteichthyes	Perciformes	Lateolabracidae	<i>Lateolabrax japonicus</i>	Japanese sea bass	3	0.024	Immature fish	-	-	-	N.D.	N.D.(1.8)	N.D.(1.5)	-	
				2020/8/7	Vertebrata	Osteichthyes	Perciformes	Sparidae	<i>Acanthopagrus schlegelii</i>	Japanese black porgy	11	0.10	Immature fish	-	-	-	1.0	N.D.(0.49)	1.0	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Tridentiger obscurus</i>	Dusky tripletooth goby	12	0.023	Immature fish	-	-	-	N.D.	N.D.(2.2)	N.D.(1.7)	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Favonigobius gymnauchen</i>	Favonigobius gymnauchen											
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gymnogobius breunigii</i>	Chestnut goby												
				2020/8/5	Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Acanthogobius flavimanus</i>	Yellowfin Goby	12	0.12	Immature fish,Mature fish	-	-	-	0.76	N.D.(0.49)	0.76	-	
2020/8/7	Vertebrata	Osteichthyes	Perciformes	Mugilidae	<i>Mugil cephalus cephalus</i>	Flathead mullet	159	0.85	Immature fish	-	-	-	3.0	N.D.(0.93)	3.0	N.D.(0.019)					
	Vertebrata	Osteichthyes	Tetraodontiformes	Tetraodontidae	<i>Takifugu niphobles</i>	Takifugu niphobles	1	0.10	Mature fish	Obscure digesta	Viscera removed	-	1.2	N.D.(0.76)	1.2	-					

*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.