

**Results of ALPS Treated Water Marine Monitoring:
Marine biota survey (carbon-14 in fish) (February, 2023)**

1. Outline of survey

(1) Date of sampling
February 10, 2023

(2) Sampling points

3 sampling points on the coastal waters in the Fukushima Prefecture (within 3 km of the proposed location of the ALPS treated water discharge outlet)

(3) Detail of the survey

The measurements of radioactive material concentration (carbon-14) in marine biota (fish)

2. Outline of results

(1) Marine biota survey (3 sampling points (6 samples))

Concentrations of carbon-14 in the marine biota (fish) (with a target lower limit of detection of 2 Bq/kg-fresh) range from 22 Bq/kg-fresh to 27 Bq/kg-fresh.

These results were approximately equal to results of carbon-14 analysis in seawater conducted in past surveys.

The range of carbon-14 specific radioactivity of marine biota in this survey:

230 Bq/kg-carbon to 240 Bq/kg-carbon (22 Bq/kg-fresh to 27 Bq/kg-fresh)

The range of carbon-14 specific radioactivity of seawater in past surveys:

240 Bq/kg-carbon to 250 Bq/kg-carbon (0.0047 Bq/L to 0.0061 Bq/L)

*Marine biota samples were collected with small quantities in this survey due to seasonal influences. So only two samples (usually three) were collected at each station, and some samples were mixed with multiple fish species (usually one sample per species).

*A target lower limit of detection means a value that is set for quality control to assure at least the detection up to the value when analysis is conducted. Each actual lower limit of detection differs according to samples, and is equal to or lower than a target lower limit of detection.

(Detailed are attached)
(Maps attached)

Analysis results for carbon-14 in marine biota (fish)

Sampling point	Sampling date (yyyy/mm/dd)	Species	Sampling depth (m)	Nuclide	Radioactivity Concentration ^{*1,*2}			Unit
E-SF1	2023/02/10	<i>Eopsetta grigorjewi</i>	-	C-14	24	±	0.37	Bq/kg-fresh
E-SF1	2023/02/10	<i>Squatina japonica</i>	-	C-14	27	±	0.40	Bq/kg-fresh
E-SF2	2023/02/10	Mixed fishes	-	C-14	22	±	0.33	Bq/kg-fresh
E-SF2	2023/02/10	<i>Squatina japonica</i>	-	C-14	25	±	0.37	Bq/kg-fresh
E-SF3	2023/02/10	<i>Squatina japonica</i>	-	C-14	24	±	0.36	Bq/kg-fresh
E-SF3	2023/02/10	Mixed fishes	-	C-14	22	±	0.33	Bq/kg-fresh

*1 Radioactivity concentrations are presented as radioactivity concentration ± combined standard uncertainty.

*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/ kg-fresh” indicates a value lower than 10 Bq/ kg-fresh).

(Attachment)

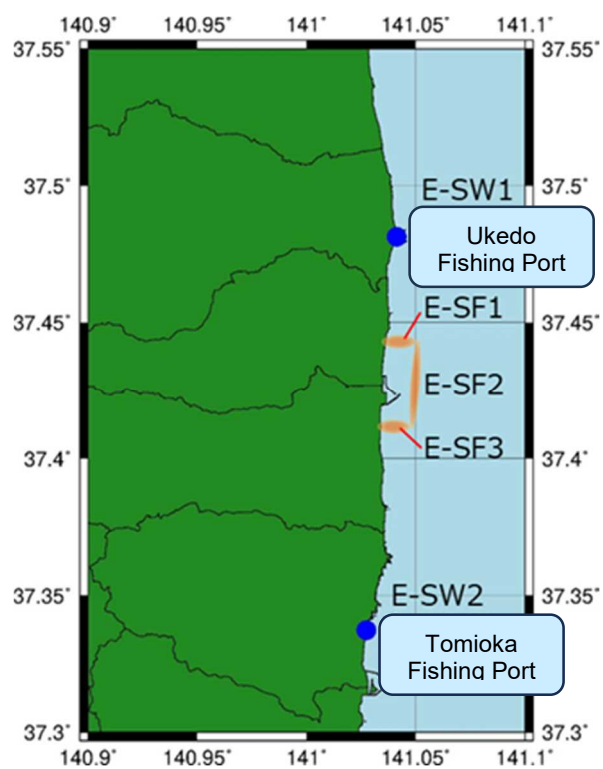


Fig. 1 Sampling points of marine biota (fish and seaweed)