

**Results of ALPS Treated Water Marine Monitoring:
Seawater survey (seven major nuclides) (May, 2023)**

1. Outline of survey

(1) Date of sampling

May 30-31, 2023

(2) Sampling points

3 sampling points on the coastal waters in the Fukushima Prefecture.

(3) Detail of the survey

- Measurements of radioactive material concentration (seven major nuclides) in seawater
- The target lower limits of detection of each nuclide* are shown below.

Nuclide	Target lower limit of detection (Bq/L)
Cesium-134	0.001
Cesium-137	0.001
Ruthenium-106	1.2
Antimony-125	0.5
Cobalt-60	0.3
Strontium-90	0.001
Iodine-129	0.01

*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.

2. Outline of results

(1) Seawater survey (3 sampling points [6 samples])

Two of the seven major nuclides were detected in the seawater, cesium-137 and strontium-90.

Concentrations of cesium-137 in seawater range from 0.0041 Bq/L to 0.0090 Bq/L.

Concentrations of strontium-90 in seawater range from 0.00055 Bq/L to 0.00097 Bq/L.

Concentrations of cesium-134, ruthenium-106, antimony-125, cobalt-60 and iodine-129 in seawater correspond to below the lower limits of detection in all samples.

(Detailed are attached)

(Maps attached)

Analysis results for the seven major nuclides in seawater

Sampling point	Sampling date (yyyy/mm/dd)	Sampling layer	Sampling depth (m)	Nuclide	Radioactivity concentration ^{*1,*2}	Unit
E-S3	2023/05/30	Surface layer	1.5	Cs-134	< 0.0006	Bq/L
E-S3	2023/05/30	Surface layer	1.5	Cs-137	0.0044 ± 0.00037	Bq/L
E-S3	2023/05/30	Surface layer	1.5	Ru-106	< 0.6	Bq/L
E-S3	2023/05/30	Surface layer	1.5	Sb-125	< 0.2	Bq/L
E-S3	2023/05/30	Surface layer	1.5	Co-60	< 0.08	Bq/L
E-S3	2023/05/30	Surface layer	1.5	Sr-90	0.00059 ± 0.00010	Bq/L
E-S3	2023/05/30	Surface layer	1.5	I-129	< 0.004	Bq/L
E-S3	2023/05/30	Bottom layer	6.6	Cs-134	< 0.0007	Bq/L
E-S3	2023/05/30	Bottom layer	6.6	Cs-137	0.0055 ± 0.00045	Bq/L
E-S3	2023/05/30	Bottom layer	6.6	Ru-106	< 0.6	Bq/L
E-S3	2023/05/30	Bottom layer	6.6	Sb-125	< 0.2	Bq/L
E-S3	2023/05/30	Bottom layer	6.6	Co-60	< 0.07	Bq/L
E-S3	2023/05/30	Bottom layer	6.6	Sr-90	0.00067 ± 0.00011	Bq/L
E-S3	2023/05/30	Bottom layer	6.6	I-129	< 0.004	Bq/L
E-S10	2023/05/30	Surface layer	1.5	Cs-134	< 0.0008	Bq/L
E-S10	2023/05/30	Surface layer	1.5	Cs-137	0.0041 ± 0.00039	Bq/L
E-S10	2023/05/30	Surface layer	1.5	Ru-106	< 0.6	Bq/L
E-S10	2023/05/30	Surface layer	1.5	Sb-125	< 0.2	Bq/L
E-S10	2023/05/30	Surface layer	1.5	Co-60	< 0.07	Bq/L
E-S10	2023/05/30	Surface layer	1.5	Sr-90	0.00097 ± 0.00013	Bq/L
E-S10	2023/05/30	Surface layer	1.5	I-129	< 0.004	Bq/L
E-S10	2023/05/30	Bottom layer	12.2	Cs-134	< 0.0008	Bq/L
E-S10	2023/05/30	Bottom layer	12.2	Cs-137	0.0090 ± 0.00071	Bq/L
E-S10	2023/05/30	Bottom layer	12.2	Ru-106	< 0.6	Bq/L
E-S10	2023/05/30	Bottom layer	12.2	Sb-125	< 0.2	Bq/L
E-S10	2023/05/30	Bottom layer	12.2	Co-60	< 0.08	Bq/L
E-S10	2023/05/30	Bottom layer	12.2	Sr-90	0.00055 ± 0.000094	Bq/L
E-S10	2023/05/30	Bottom layer	12.2	I-129	< 0.004	Bq/L

*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/L” indicates a value below 10 Bq/L).

Analysis results for the seven major nuclides in seawater

測点	採取日	採取層	採取深度 (m)	核種	放射能濃度 ^{※1,※2}	単位
E-S15	2023/05/31	Surface layer	1.5	Cs-134	< 0.0007	Bq/L
E-S15	2023/05/31	Surface layer	1.5	Cs-137	0.0070 ± 0.00057	Bq/L
E-S15	2023/05/31	Surface layer	1.5	Ru-106	< 0.6	Bq/L
E-S15	2023/05/31	Surface layer	1.5	Sb-125	< 0.2	Bq/L
E-S15	2023/05/31	Surface layer	1.5	Co-60	< 0.08	Bq/L
E-S15	2023/05/31	Surface layer	1.5	Sr-90	0.00082 ± 0.00013	Bq/L
E-S15	2023/05/31	Surface layer	1.5	I-129	< 0.004	Bq/L
E-S15	2023/05/31	Bottom layer	5.5	Cs-134	< 0.0008	Bq/L
E-S15	2023/05/31	Bottom layer	5.5	Cs-137	0.0073 ± 0.00059	Bq/L
E-S15	2023/05/31	Bottom layer	5.5	Ru-106	< 0.6	Bq/L
E-S15	2023/05/31	Bottom layer	5.5	Sb-125	< 0.2	Bq/L
E-S15	2023/05/31	Bottom layer	5.5	Co-60	< 0.08	Bq/L
E-S15	2023/05/31	Bottom layer	5.5	Sr-90	0.00076 ± 0.00012	Bq/L
E-S15	2023/05/31	Bottom layer	5.5	I-129	< 0.004	Bq/L

*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/L” indicates a value below 10 Bq/L).

(Attachment)

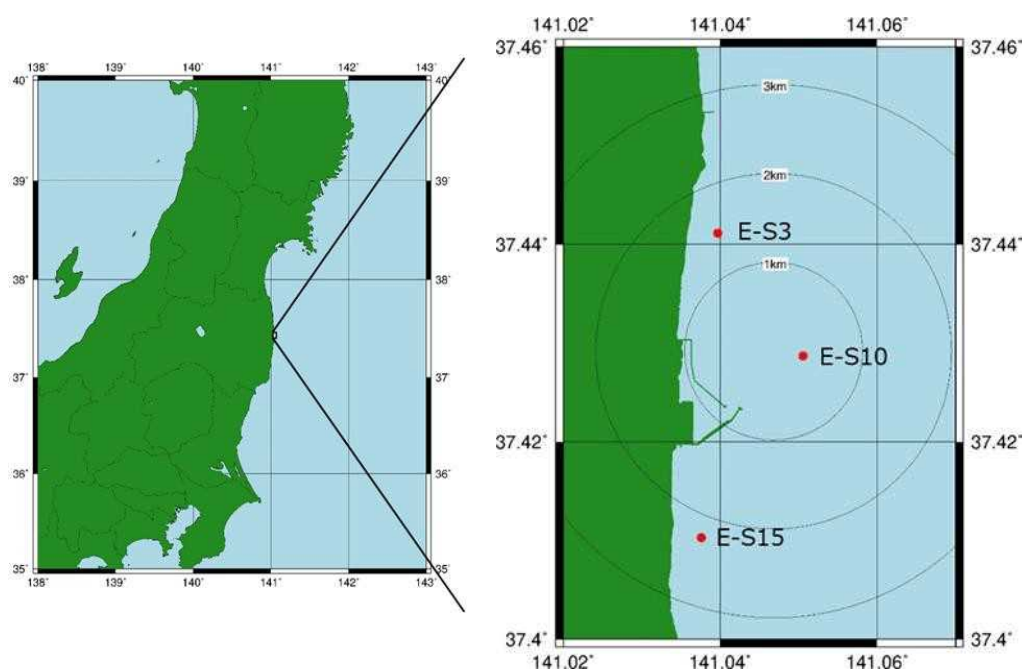


Fig. 1 Sampling points for the seven major nuclides in seawater