

Uranium Analysis Result in the ocean soil

1. Analysis result

(Unit : Bq/kg·Dry soil)

Sampling spot	Date of sampling/ Analyses organization	U-234	U-235	U-238
①3 km offshore of Ena	Sep. 8/ Japan Chemical Analysis Center	$(5.5 \pm 0.40) \times 10^0$	$(2.2 \pm 0.71) \times 10^{-1}$	$(6.4 \pm 0.44) \times 10^0$
②8km offshore of Iwasawa Shore	Sep. 9/ Japan Chemical Analysis Center	$(6.4 \pm 0.36) \times 10^0$	$(2.5 \pm 0.56) \times 10^{-1}$	$(6.1 \pm 0.35) \times 10^0$
③5 km offshore of Kashima		$(2.8 \pm 0.21) \times 10^0$	N. D. [$<1.2 \times 10^{-1}$]	$(2.2 \pm 0.18) \times 10^0$
④3km offshore of Haramachi Ward	Sep. 13/ Japan Chemical Analysis Center	$(2.4 \pm 0.20) \times 10^0$	N. D. [$<1.4 \times 10^{-1}$]	$(2.0 \pm 0.18) \times 10^0$
⑤ 15 km offshore of Fukushima Daiichi	Sep. 25/ Japan Chemical Analysis Center	$(1.0 \pm 0.51) \times 10^1$	$(4.3 \pm 0.87) \times 10^{-1}$	$(9.2 \pm 0.48) \times 10^0$
Specific activity of natural uranium(Bq/g)		1.2×10^4	5.7×10^2	1.2×10^4
Abundance ratio of natural uranium (wt%)		0.0054	0.72	99.3

2. Evaluation

We evaluate uranium detected in these samples are as same level as those exist in the natural environment from the reasons below;

- As natural uranium exist under radioactive equilibrium (radioactive concentration is same for U-234 and U-238), for the result of all the samples ①, ②, ③ ④, and ⑤ radioactive concentration for U-234 and U-238 were nearly the same.
- In the case of sample ① ② and ⑤, abundance ratio of u-235/U-238=0.0073 for U-235 were nearly the same.

[Sample ①] U-235: 2.7×10^{-6} g/kg · dry soil (0.22 Bq/kg · dry soil), U-238: 5.1×10^{-4} g/kg · dry soil (6.4 Bq/kg · dry soil), U-235/U-238=0.0053*

[Sample ②] U-235: 3.1×10^{-6} g/kg · dry soil (0.25 Bq/kg · dry soil), U-238: 4.9×10^{-4} g/kg · dry soil (6.1 Bq/kg · dry soil), U-235/U-238=0.0064*

[Sample ⑤] U-235: 5.4×10^{-6} g/kg · dry soil (0.43 Bq/kg · dry soil), U-238: 7.4×10^{-4} g/kg · dry soil (9.2 Bq/kg · dry soil), U-235/U-238=0.0073*

※Calculation may differ due to rounding.

End