



E. coli measurement kit

Possible to measure the number of *E. coli* in sewage, industrial wastewater, river water, groundwater, or drinking water!

Feature

- Measure 96 samples at the same time
- Measurement time is only 3 hours
- Reasonable price for 250 yen per test
- Only 200 μ L of sample volume is needed

Specifications

Samples	Sewage, industrial wastewater, river water, groundwater, drinking water
Storage temperature	Store at 2-8 °C
Expiration date	6 months after production
Equipment used	Fluorescence microplate reader

About *E. coli* measurement kit

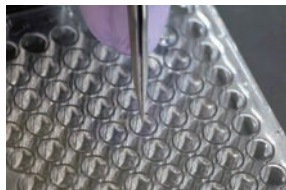
This kit is for measuring the number of *Escherichia coli* (*E. coli*). Currently, the number of *E. coli* is measured by incubating *E. coli* for 24 hours on an agar plate or in agar medium. A clean environment is required to prepare the culture medium, and the analyst's subjective may affect the measurement. The kit provides a simple, rapid, and low-cost method for measuring *E. coli* that overcomes all the shortcomings of existing technologies. In addition, 96 samples can be analyzed simultaneously. This kit is able to measure the number of *E. coli* in all kinds of liquids including sewage, industrial wastewater, river water, groundwater, and drinking water, etc., and quickly detect fecal contamination that causes waterborne diseases and food poisoning.

Operation procedures



37 °C

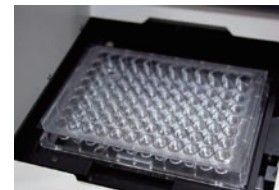
Set the plate reader at 37 °C



Make holes in the seal attached to the plate (or remove the seal.)



Dispense 200µL of the test sample into each well of medium-containing 96-well plate.



Set the excitation WL at 360 nm and the measurement WL at 460 nm. Measure every 10 minutes for 3 hrs.

Example

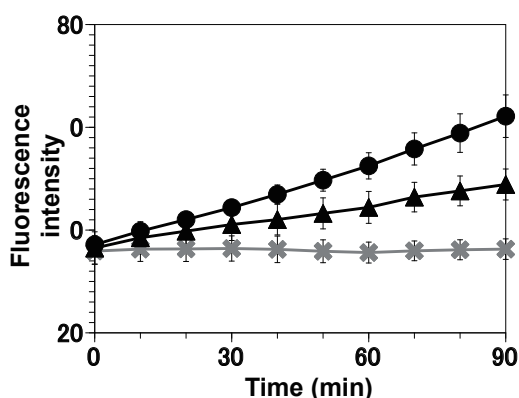


Fig 1. Changes in fluorescence intensity over time. The samples were treated sewage water with 130 cfu / mL *E. coli* (●) or 48 cfu / mL *E. coli* (▲), and distilled water (✱).

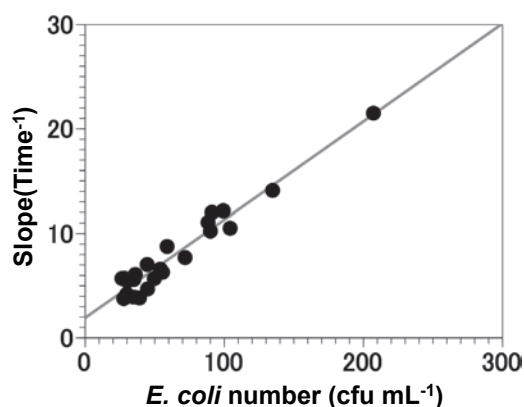


Fig 2. Relationship between the *E. coli* number and the slope.

References

- 1.) Hisashi Satoh, Kai Kikuchi, Yutaka Katayose, Shu Tsuda, Reiko Hirano, Yuga Hirakata, Masaaki Kitajima, Satoshi Ishii, Mamoru Oshiki, Masashi Hatamoto, Masahiro Takahashi, Satoshi Okabe (2020) Simple and Reliable Enumeration of Escherichia coli Concentrations in Wastewater Samples by Measuring β-D-glucuronidase (GUS) Activities via a Microplate Reader. Science of The Total Environment. In press
- 2.) Hisashi SATOH, Shu TSUDA Shu, Kai KIKUCHI Kai, Reiko HIRANO Reiko (2019) "Development of a simple and rapid method for determining coliforms in wastewater based on fluorogenic enzymatic substrate" Journal of Japan Sewage Works Association. 56(684), 110-117.

Product name	Product code	Kit contents	List price
E. coli measurement kit	RECEL964	96 well plate with E. coli selective freeze-dried medium x 4	¥96,000



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