Aquagenx® Well Water Test
E. coli & Total Coliforms Presence/Absence (P/A) Test
Instructions for Use

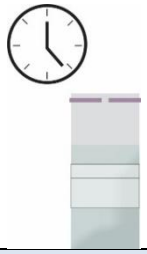
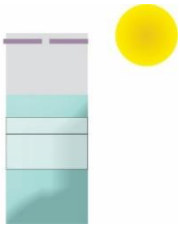
Overview
The Aquagenx Well Water Test Kit detects *E. coli* and Total Coliform bacteria in a 100 mL well water sample.

The US EPA says there must be zero *E. coli* (absence) in 100 mL water samples to be considered safe to drink.

Shelf Life of Growth Medium
Up to three years after date of manufacture when stored properly. Expiration date is printed on growth medium packet.

Storage of Growth Medium
39°-77°Fahrenheit (4-25° Celsius) in a dry environment. Growth medium can be stored in a refrigerator. Do not freeze the growth medium.

Testing Procedure

STEP 1	**STEP 2**
Collect 100mL sample with Thio-Bag. Pour out excess water if you fill beyond 100mL fill line. The white tablet neutralizes residual chlorine in sample if present and will dissolve. 	Pour powder medium into sample. Gently swirl bag and squeeze clumps of powder to dissolve. 
STEP 3	**STEP 4**
Incubate sample 24-48 hours. 	Determine test results. 
STEP 5	**STEP 6**
Decontaminate sample with 1 tsp liquid bleach. 	Dispose of Thio-Bag in solid waste. 

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Incubation Periods at Room Temperature

95-98°F: Incubate 20 hours
87-93°F: Incubate 24-30 hours
77-86°F: Incubate 40-48 hours
Below 77ºF: Incubate in a portable incubator at 95-98°F for 24 hours or put in or near another heat source for 48 hours. Temperature should not exceed 98°F.

See "Incubation Period Guidance": https://www.aquagenx.com/product-documents/

Color-Change Test Results

Color in Thio-Bag	Yellow/Yellow Brown in daylight and does not fluoresce blue under UV light	Blue/Blue Green in daylight	Yellow/Yellow Brown in daylight that fluoresces blue under UV light (365nm)	Blue/Blue Green in daylight that fluoresces blue under UV light (365 nm)
E. coli	Negative	Positive	Negative	Positive
Total Coliforms	Negative	Positive	Positive	Positive

Positive *E. coli* test results include:

- Any trace of blue/blue-green, including a single speck of blue/blue green, or a streak of blue/blue green
- Blue/blue green sediment at the bottom of the Thio-Bag
- The shade or intensity of blue does not matter

Negative *E. coli* test results include:

- Any shade of yellow/yellow brown
- The shade or intensity of yellow does not matter

Why a Yellow/Yellow Brown Sample in Daylight Might be Positive for Total Coliforms Under UV Light

Total Coliforms are a large group of different types of bacteria, many of which are not of fecal origin. Fecal bacteria and pathogens in drinking water are what can potentially make people and animals sick. *E. coli* is both a fecal bacteria and Total Coliform, but not all Total Coliforms are *E. coli*. Total Coliforms only give a general indication of the sanitary condition of a water supply. *E. coli* is the most specific indicator of fecal bacteria and pathogens in water, which is why the U.S. EPA specifies it in national drinking water standards.

Decontaminate sample

- Add 1 teaspoon of liquid bleach (NaOCl) to Thio-Bag.
- After 30 minutes, pour contents into a sink, toilet or hole in ground and safely dispose of the empty Thio-Bag with solid waste.

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