

Rainfresh WC1 Test Kit is a reliable & easy Presence/Absence screening tool that detects coliform and E.coli bacteria in drinking water. It is sensitive enough to detect just one colony forming unit (CFU) per 100 ml of water. It is simple to use, easy to interpret without using any testing equipment.



Presence/Absence tests are routinely performed by municipal and private laboratories and waterworks facilities to screen samples collected from community water supplies. In Canada, Ministry of Environment and Ministry of Health, Ontario, advocate the use of presence/absence test for screening samples collected from drinking water supplies because of its lower cost and higher sensitivity compared to membrane filtration method.

**Principle**

The kit includes a plastic bag with a special growth medium. Sample water is simply added to the bag and mixed with the growth medium to form a straw yellow solution. The growth medium has been specifically designed for the preferential growth of coliform when incubated at a temperature of 35°C to 37°C for 24 hours. Under these conditions, coliform, if present, outgrow other bacterial species that may be present in the water sample. As the coliform grow, they are induced to secrete an enzyme that causes a colour change of the solution to blue-green.



**Colour change to yellow**  
No Coliform detected



**Colour change to blue/green**  
Coliform detected – Water unsafe

Ambient temperature	Incubation Period
35°C	24 hours
30°C	36 hours
28°C	48 hours
24°C	60 hours

**TABLE I**

At lower temperatures, a longer incubation period is required to produce the blue-green colour change. Table I shows the incubation periods at various temperatures. However, for greatest reliability, shorter incubation periods at temperatures between 30°C and 37°C are recommended.

Each test kit can perform a single test and is available in standard plastic bag or optional bottle.

**HIGHLIGHTS**

- Highly sensitive – detects even 1 CFU/100 ml of coliform or E.coli
- More sensitive and economical than membrane filtration method for screening samples
- Used by waterworks facilities, municipal and private laboratories
- Simple and easy to use and interpret, without any equipment

