

## Fiji Government Department of Water and Sewerage Uses CBT EC+TC MPN Kit for Large Scale Survey



The Department of Water and Sewerage is under the Ministry of Public Works, Meteorological Services and Transport of Fiji. They are responsible for the formulation of policies, legislation, and regulatory frameworks for the provision of a sustainable water and sewerage sector.

<https://www.mims.gov.fj/dept-of-water-sewerage/>

### Project and Problem

Fiji has approximately 122 Ecological Purification Systems (EPS), which are nature-based water treatment systems they monitor for operations and water quality. In 2022, the Department of Water and Sewerage began a large-scale project in collaboration with UNICEF called Rural Water Point and WASH in Schools survey. The survey concentrated on collecting WASH related data from villages, settlements, and schools. Water quality monitoring was a unique yet very important component to the survey to gauge the actual water quality conditions in rural areas.

The problem was laboratory access in rural, remote areas of Fiji is inaccessible or unavailable. In addition, the topography of Fiji, scatter of Islands, rugged roads and difficulty accessing maritime areas prevents sample transportation to any lab in a timely manner. Implementers in the field were non-technical staff who needed a simple water quality test they could use in low resource areas.

### Solution

The Department of Water and Sewerage selected the Aquagenx® [CBT EC+TC MPN Kit](#), which they have been using since 2018. During the Rural Water Point and WASH in Schools survey project, they purchased a total of 4000 Aquagenx tests and analyzed about 3000 samples for every water point they visited during the survey. The survey was targeted to collect the baseline data for WASH in rural communities and WASH in schools data. A total of 1600 village and settlement locations were visited with 978 kindergarten, primary and secondary schools. There were many locations where people have more than one drinking water source and supply, therefore every drinking water point was sampled and tested using the CBT EC+TC MPN Kit. The CBT Kit is also used for other water quality monitoring outputs as part of their Costed Operation Plan.

As part of their testing protocol requirements, they compared CBT EC+TC MPN Kit test results to other *E. coli* tests in accredited water and wastewater laboratories in Fiji.

To capture and monitor water quality data, the Department used Akvo Flow along with the Akvo Caddisfly smart phone app to record water quality test results.

## Test Results

In summary, survey results indicated that there are still many villages, settlements and schools that do have access to safe, clean water, and their water quality needs to be improved. While achieving Sustainable Development Goal 6 targets, water accessibility is important, however the Department also believes people should be provided with safe drinking water for better health and well-being.

CBT EC+TC MPN Kit test results were identical to test results in comparative testing methods of *E. coli* in other accredited labs.

## Conclusion

Bhawna Chand, Project Manager, says “The CBT EC+TC Kit is a very good alternative to lab testing. Due to its effectiveness and simple testing procedures, our staff were confident testing samples and recording accurate results.

“The benefits of using the CBT EC+TC Kit are it’s simple to use, easy to carry in the field, does not a require lab-controlled environment, and its test results are as accurate as lab-based tests.”

Mrs. Chand concludes, “We will use the CBT EC+TC MPN kits for all our water quality testing this year and in years to come. I would recommend this product to any organization or individual who is not able to set up or access a lab for microbiological testing but still needs to conduct qualitative and quantitative water quality testing.”

