

Red Cross-Red Crescent Movement Uses CBT in Timor-Leste, Malaysia and Nepal



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Using the CBT Kit in Tundikhel Camp, Nepal

About the CBT



The Aquagenx CBT is a portable water quality test kit that lets anyone, anywhere determine if water contains *E. coli* bacteria and poses a health risk.

Challenge

The Red Cross-Red Crescent movement has a global water and sanitation program to save and improve the lives of vulnerable people. Much of the work is carried out in remote locations, which means that testing water sources for *E. coli* contamination is limited by delays and difficulties in getting samples to a lab.

Since 2002 in Timor-Leste, the Australian Red Cross has supported Cruz Vermelha de Timor-Leste (Timor-Leste Red Cross) to construct community gravity-feed water supply projects, which relies on protecting natural spring sources from contamination.

In 2015 the IFRC responded to severe flooding in northern Malaysia with Malaysian Red Crescent Society, and to the devastating earthquake in Nepal with Nepal Red Cross Society. These response efforts required water quality testing for fecal contamination in the aftermath of each disaster.

In all three cases, the teams needed a portable water quality test that could generate quantified results on-site without sending samples to a lab.

Solution

The teams used the Aquagenx Compartment Bag Test (CBT) to test for *E. coli* bacteria in remote locations in Timor-Leste, Malaysia and Nepal. In all three locations, they sampled raw water quality with the CBT and also tested water for TDS, pH and chlorine.

The CBT confirmed the effectiveness of spring protection In Timor-Leste, the risk of existing water sources in Malaysia and the effectiveness of an emergency chlorination program in Nepal.

Quantified Test Results

Most Probable Number (MPN) test results varied in Timor-Leste, where protected spring sources tested negative for *E. coli*, and unprotected sources ranged from Intermediate Risk/Probably Safe to Intermediate Risk/Possibly Safe. Malaysian test results were entirely Unsafe. In Nepal, chlorinated water tested negative for *E. coli*, and unprotected sources test results were dangerously Unsafe.

Conclusion

“The CBT should be adopted for standard water quality testing practices and disaster response within the Red Cross/Red Crescent movement and used by all member societies working in a water supply capacity,” says Stuart Bryan, Water and Sanitation Engineer with the Australian Red Cross.

“The CBT’s speed, convenience and quantitative test results add value to water quality investigations and validate projects and programs,” continues Bryan. “It is simple to use on-site in remote locations, and its color-change test results are an excellent way of raising water quality awareness for local communities.”