

TECTA™ B16 Success Story

Philippines Department of Health National Reference Laboratory

National Reference Laboratory (NRL) East Avenue Medical Center Department of Health (DOH)

The National Reference Laboratory (NRL) is the technical arm of the Department of Health (DOH) under the administration of the East Avenue Medical Center, a DOH hospital.

A lab committed to excellence; NRL-EAMC is the Philippines' reference laboratory for environmental, occupational health, toxicology and micronutrient assay. It functions to provide laboratory reference/referral services for confirmatory testing, conduct surveillance and research, train laboratory personnel, maintain quality assurance programs for laboratory tests, and perform technical evaluations of reagents and diagnostic kits.

NRL is ISO /IEC14025:2005 accredited.

"Once in a while we get urgent samples from city jails and evacuation centers. Tecta-B16 is definitely very useful, as we have tested it on these samples and were surprised that it was able to detect and alert us in as little as just two hours!"

Sheila Salo, Med Tech 2/Analyst

Challenge Detected

Registering as number four in a global survey of the world's most populated cities, Metro Manila is home to about 2.4 Million people in a total land area of just 613.94 km².

As expected, such a huge population poses greater risks in health, safety and environmental management for the government. Challenges in water quality monitoring for drinking, recreational and inland bodies of water in this dense area can be very demanding.

Small outbreaks from E. coli and fecal coliform contamination in water can easily occur in localized populations, such as city jails and areas with unofficial settlers. The Philippines is also the most widely affected country by climate change and tropical storms; in some cities and municipalities where evacuation centers are often prepared, the government needs to ensure that the water supply to hundreds and sometimes thousands of evacuees is safe.

The National Reference Laboratory is responsible for this within Metro Manila. Aside from having its own clients for several services like water chemistry and microbiology tests, drug testing, private water testing labs and others, such sudden natural disaster events can greatly affect the workload and workflow in their laboratory.

With limited manpower in the water microbiology section of the lab running an average of 800 water samples per month, sudden increases in sample load makes it very difficult for them to prepare the media, reagents and the sterilization of labware. With thousands of lives at stake, their main challenge is to provide the most accurate sample results in the shortest time possible.



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Benefits Detected - Fast Accurate Results in 2-18 Hours

The benefits of using TECTA™ as part of a daily testing regime are; SPEED, ACCURACY, and AUTOMATION, including:

- U.S. EPA approved method
- Laboratory-grade results
- Immediate Email notification of results upon detection
- Completely automated test procedure
- Automated results report
- Fast detection time
- Extremely sensitive at lower concentrations
- Accurate digital results vs. other testing subject to bias of visual reads

Solution Detected

The TECTA-B16™ was created by the Pathogen Detection Systems of Canada, in response to contamination events and global demand for faster and automated microbial detection solutions.

The TECTA-B16™ provides accurate and fully automated test results for E.coli and coliforms bacteria much faster than traditional methods. The Tecta solution uses the directed enzyme-substrate method combined with a patented polymer partition technology and spectrometer to actively read and interpret test results, enabling the lab to have an early alert in the case of contamination events.

Utilizing an automated microbiological platform, the Tecta method is simple, sensitive and flexible, allowing samples to be tested any time of the day. This feature is of specific benefit for the NRL lab, tasked for public safety and accountable to their client's urgent water sample analysis requirements.

Fast and reliable results for a fast and reliable laboratory!

Success Detected

NRL validated the TECTA-B16™ unit with both environmental samples and spiked lab samples, challenging the accuracy of the method to detect very low levels of E.coli, as well as high concentrations.

The NRL technicians experienced the instrument's sensitivity as it detected samples spiked with as low as 1 CFU/100mL. They were also shocked to see the instrument detect and provide results for samples with higher concentrations of target organisms in just 2 hours, without the need for sample dilutions.

After a few months of statistical analysis, NRL released their TECTA-B16™ validation report approving it as an accepted alternative method for the detection of Total coliform and E.coli, which is acknowledged by the Philippines Department of Health.

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