TECTA - PDS

TECTA™ Success Story

Porvoo Water Treatment Plant

Owned by the city of Porvoo, the Porvoo vesi is a public utility that delivers water for households and businesses for consumption and also receiving and cleaning wastewater. Although the plant began operating in 1913 many upgrades have occurred making it one of the most technologically advanced and environmentally friendly plants in the region.

The number of people the plant now serves has reached 44,000.

Porvoo is a town on the southern coast of Finland approximately 50 km east of Helsinki.

Challenge Detected

Porvoo vesi is waste water treatment plant in the city of Porvoo Finland, that provides customers with household water and also directs and treats wastewater. The plant supplies a large number of homes and businesses and needs to ensure that the water is clean, safe, and plentiful. The plant is also extremely energy efficient, utilizing new and unique methods to recycle energy and heat. The plants in-house lab required a testing method that would ensure the water was being tested quickly, efficiently, and they received results that they could trust.

Solution Detected

The decision was made to start working with the TECTA™ B16 to test for water microbials in 2014. The device has brought flexibility, reliability, technological advancement, and rapid results to what was once a labour intensive method and long incubation periods. The plant is geographically a long way from any third party laboratory and the TECTA™ B16's ease of use means that anyone can run a test – without any special training.

The TECTA™ B16 was developed by TECTA-PDS to provide accurate and fully automated testing for *E. coli* and Total Coliform much faster than traditional incubation methods that require a laboratory environment, trained microbiologist, and a fixed incubation time. TECTA cartridges are pre-sterilized so there can be no impurities in the TECTA bottles prior to unsealing.

Porvoo Water plant manager Elina Anttila said, "Earlier we had our own laboratory technician and when he retired, it was time to think about new solutions. These days analysis are done by processors because the TECTA™ B16 analyser does not require training or degree of a laboratory technician."

During the past year, Porvoo's water plant made nearly 1,300 analyses in its own laboratory and a total of approximately 6,800 analyses.

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*

Success Detected

"It's easier and more flexible to perform microbial analysis with our own, internal testing system, and this allows for more flexibility," says Anttila. She clarifies that it is very rare that drinking water samples contain impurities.

"Some of the samples are sent to an accredited laboratory for analysis, but every week we are also doing the analysis with our own TECTA unit. We do not want to make all the amendments by ourselves but using TECTA is a good addition to our testing methods."

"We have a pre-made observation program. Each week, there is an indication of where samples are collected. The sampling program has been carefully considered in advance. Inspections always include samples of water from different locations."

Anttila points out that if a water company is operating in the area, which is geographically a long way from the lab and all the samples have to be sent elsewhere, the rapid TECTA™ B16 analyzer certainly eases the testing process.

In many water plants, self-monitoring is being developed and further work is being developed to ensure secure water distribution to customers.

The TECTA™ B16 is already in use in more than 35 countries around the world.

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Elina Anttila, Porvoo Water plant manager

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