

TECTA™ B16 Success Story

SÉPAQ

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The Société des établissements de plein air du Québec's (SÉPAQ) key mandate is to manage and develop public spaces along with regional tourism facilities. Its mission is to make sure they are readily accessible to the public, developed in a conscientious manner and to provide protection ensuring best in class facilities for the public, the Province of Quebec and for future generations.



Key Figures

- Over 5,000 water tests per year
- 200 water distribution networks
- 49 establishments
- 24 provincial parks
- 10 tourist resorts

"Return on investment of using TECTA™ B16 on-site in only two years"

Simon Sauvageau, SÉPAQ

Challenge Detected

SÉPAQ is responsible for testing potable water within the largest network of outdoor sites in the province of Quebec, Canada. Some of these sites are very remote, such as Port-Menier on Anticosti Island, and require a significant logistical effort to coordinate sampling. Such sampling typically occurs at four points on the island within the same day, and needs to be delivered via aircraft that can only fly in favorable weather conditions. Samples can only be accepted at the accredited central lab in Québec City if they arrive within 48 hours of the sampling time, and meet the strict guidelines for sample temperature range - which is highly dependent on storage conditions on the airplane. This extensive amount of coordination is very costly and still only offers results within a minimum of 72 hours after sample collection. SEPAQ has been searching for an easy-to-use, accredited desktop instrument to test potable water, simplify sample collection and transportation issues, reduce costs, and most importantly improve public safety by offering an on-site testing solution with results available within to 18 hours.

Solution Detected

TECTA-PDS developed the TECTA™ B16 as a "lab in a box" solution to be installed and operated on-site and provide automated, laboratory-grade E.coli and Total Coliform sample results. The intuitive display and overall ease-of-use eliminates the need for a highly skilled lab technician to operate, and automated email alerts guarantee a faster and more accurate response than traditional incubation methods. The TECTA™ B16 is the only automated U.S. EPA approved test method. It is simple to use and provides accurate, objective results.

After witnessing the success of the TECTA™ B16 system in the municipality of St-George de Beauce, Quebec, Mr. Simon Sauvageau from SEPAQ has started to introduce the technology into other remote regions, such as Port-Menier on Anticosti Island.

“Why can’t someone on an island have access to potability results as quickly as someone on the main continent?”

Simon Sauvageau, SÉPAQ

Key Benefits of TECTA™ B16 from SÉPAQ:

- Same day representative result
- Increased security of water supply
- Economical gains of testing on-site

Eliminated Costs:

- Same day sampling
- Packaging
- Airfare and transport
- Lab fees
- Lost samples

Success Detected

The biggest benefit from implementing the TECTA™ B16 system was the fast results on the potability of the water, as 75% of the population of Anticosti Island rely on this water for drinking. The overall ease-of-use was also a major benefit to the operation, it only took 10 minutes to prepare and initiate six samples. The accuracy of the TECTA™ B16 system was also highlighted, as 58 duplicate samples were sent to a central reference laboratory and confirmed 100% agreement with TECTA™ B16 results. Finally, when eight of the 58 samples were found to be present of E.coli and Total Coliforms, all operators and researchers were amazed at how the TECTA™ B16 detected the positive results and sent real-time email alerts to SÉPAQ headquarters and other government agencies, for which they would traditionally be waiting for days.

By eliminating the need to ship samples, a cost analysis showed a significant return on investment while utilizing the TECTA™ B16 on-site for only two years. In addition, having to wait up to three days for potability results had a knock-on effect by increasing the number of days bottled water was needed to be imported to Anticosti Island as a back-up water source. The economic gain is very significant in remote locations, particularly where restaurants, hotels and other public buildings operate and rely on the supply of potable water.

Approval Detected

While using the TECTA™ B16 on the island of Anticosti, SÉPAQ approached the MDDELCC to launch an equivalency study of the TECTA™ B16 EC/TC method to validate its results and equivalency against the Québec provincial testing standards; asking whether the TECTA™ B16 instrument could meet the minimum requirements imposed on accredited labs for drinking water tests in Québec. In essence, could the TECTA™ B16 be considered a LAB in itself? The CEAEQ in Québec City was mandated by the Direction des Politiques de l’eau du ministère to carry out these analyses as they had already accredited numerous drinking water test methods, including membrane filtration with MI medium, chromogenic and fluorogenic Presence/Absence methods. The study was conducted from July to December 2015 and positively concluded that the TECTA™ B16 EC/TC method met all minimum necessary requirements, concluding that the TECTA™ B16 could in fact be considered the world’s first recognized automated and portable lab for testing drinking water.