

BIOTECTOR AND AIRPORT DE-ICING

by Jason Padilla, Global Product Manager

The Problem

The Port of Portland was spending nearly \$300k a year maintaining their old BIOX BOD analyzers. They used 16 analyzers to report BOD to the EPA for their permit and they had a contract with an outside service company to keep these analyzers running continually. The BIOX units broke down frequently and many of the replacement parts had a long lead time for ordering.

The Port would often refer to the picture to the right as the “Wall of Shame” because the BIOX units installed on this wall rarely worked at the same time.



The BioTector Solution

BioTector’s patented Two-Stage Advanced Oxidation technology was developed specifically to meet the challenges presented in an airport environment. Glycol concentrations in airports can change from 10ppm to 20000ppm very quickly. Most TOC analyzers cannot handle that wide range of TOC and TOC analyzers with traditional technologies are prone to clogging with high concentration samples. TSAO is a powerful and aggressive oxidation process using hydroxyl radicals that self cleans between sample cycles, lowering the maintenance needs and overall cost of ownership of the analyzer.

By replacing all 16 BIOX units with 12 BioTector analyzers, the Port discovered they could cancel their service contract and hire someone to maintain the instruments for 1/3 the cost. The added reliability and up-time of the analyzer made the switch a no brainer.

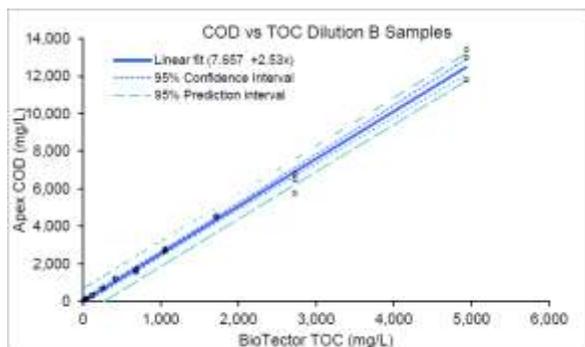


Figure 2. Regression Scatter Plots of COD Data from Apex and TOC Data from the BioTector

The Port commissioned a correlation study which showed the TOC reading from the BioTector matched the BOD and COD measurements in the lab. The study concluded that the Port could use the TOC reading from the BioTector to report for their permit.

“Based on the review of data reliability and regression analysis, using the Hach BioTector TOC analyzer is an accurate method to measure TOC, BOD, or COD concentrations in the Port of Portland’s storm water discharges to demonstrate compliance with NPDES Permit” - Geosyntec

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