



Biofilm Monitoring Challenge

Biofilms are communities of surface attached bacteria surrounded by a protective microbial secretion. Biofilms are the root cause of serious and costly problems in water systems including microbial influenced corrosion (MIC), heat transfer losses, reduced flow, and Legionnaires' disease. To date, there has not been a practical and effective way to continuously monitor microbiological activity in water systems and predict biofilm formation.

- Standard bio-monitoring methods are a manual process
- Bacteria dip slides require 2-3 days incubation and only measure a fraction of the total microbial population
- ATP test pens and meters are expensive to use with results that can be misleading
- Bulk water microbiological tests do not measure or predict biofilm formation!



**Bacteria
Dip Slide**

New Automated Biofilm Monitoring Technology!

Chem-Aqua's bioDART Biofouling Monitor is new, patent-pending technology that provides a system specific measure of the potential to form biofilms and biofouling deposits in recirculating water systems. bioDART automated biofilm monitor provides valuable information that will help you:

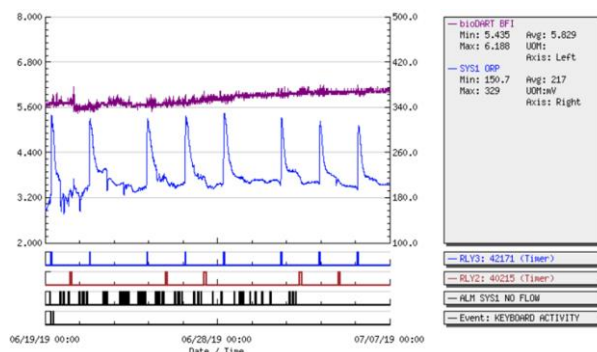
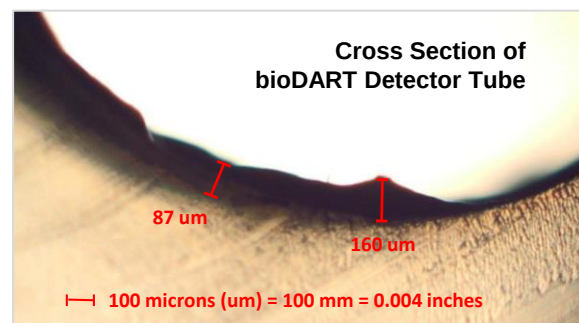
- Evaluate the potential for biofilm formation and related problems
- Monitor and improve microbiological control measures
- Identify upset conditions so action can be taken now

How Does bioDART Work?

Chem-Aqua's bioDART uses a side stream of system water flowing through a narrow lumen detector tube under laminar conditions to amplify the potential for biofilm growth. Advanced optical sensors continuously measure the reduction in light transmittance as biofouling deposits form inside the detector tube. The data is converted into BFI (Biofouling Index) readings that correlate with biofilm formation.

bioDART monitor provides a sensitive, predictive indicator that reflects the impact of bacteria counts, biocide additions, system cleanliness, operating conditions, and nutrient load on biofilm formation. It automatically tracks the BFI readings to gauge microbial control and provide an early warning of problems.

- Automatically logs key events and alarms
- Stand-alone monitor or connect to a web-enabled controller
- Validated by the Montana State Center for Biofilm Engineering



Invaluable Data To Optimize Program Results