Did you know?
In your cooling tower...

1. Nutrients and microbes are continuously scrubbed from the air.
2. This provides an ideal environment for bacteria to grow.

Through your piping and equipment, a biofilm forms.

As water circulates through your cooling systems, bacteria can multiply to high levels, even with routine biocide additions.

Biofilms cause serious problems.

- **CORROSION DAMAGE**
  Corrosive bacteria can grow to high levels under biofilms.

- **HARMFUL PATHOGENS**
  Harmful pathogens can grow in biofilms, including the bacteria associated with Legionnaires’ disease.

- **INCREASED ENERGY COSTS**
  Biofilms are very insulating. They reduce heat transfer efficiency 4X more than calcium scale deposits.

Cost of Biofilm Deposit in 500 Ton Chiller

Excess Annual Electricity Cost vs. Deposit Thickness

Biofilms Are Extremely Hard to Control.

The molecules that form the biofilm are bound together with a locking mechanism termed the calcium bridge. High doses of biocides will not break the calcium bridge. The bacteria multiply, protected by the biofilm.

What if you could disrupt the calcium bridge?
Disrupts the Calcium Bridge

bioXile® is a new, patent-pending biofilm cleaning process that unlocks the calcium bridge to allow the biocide to destroy the biofilm.

- **Extremely Effective**
  bioXile works with biocide additions to remove biofilm more effectively than using biocides alone or with biodispersants. This disrupts the persistor mechanism making it more difficult for biofilm to re-form.

- **Fast Dissolving**
  As the packaging dissolves, bioXile components react releasing the key to unlock the calcium bridge.

- **Easy to Use**
  It comes prepackaged in one-pound water soluble bags that can be added directly to the cooling tower basin.

**When to Use**
- Periodically, to enhance biocide additions.
- Spring, to ensure efficient operation after layup.
- Before a system is taken out of service for cleaning or layup.
- Whenever there is a detectable biofilm problem.

**All this...**

- **Saves You Money**
  The bioXile process helps keep the waterside surfaces clean by removing stubborn biofilms not controlled by routine biocide additions.
  - Improves energy efficiency
  - Reduces corrosion
  - Helps your biocide program control waterborne pathogens

Let your Chem-Aqua representative show you how the bioXile process can solve your biofilm problems.

The only cleaner that can unlock your Biofilm problems!

Learn more at [www.chemaqua.com](http://www.chemaqua.com)