



LEGIONELLA

Legionella is found virtually everywhere in the aquatic environment. Certain strains of this microbe are opportunistic pathogens. Control of *Legionella* by regular maintenance of your HVAC System Cooling Tower is particularly important during warmer months when high temperatures place additional demands on your system. *Legionella* concentrations may rise due to increased temperatures in your cooling tower water. In addition, research indicates that *Legionella* grown in higher temperature water (greater than 30 degrees centigrade) tend to be more pathogenic. If you are concerned about *Legionella* in your HVAC System, BioVir Laboratories, Inc. is available to discuss how you might effectively survey your system for *Legionella* and offers a full range of state-of-the-art *Legionella* tests including:

- Culture (Growth)
- Direct Fluorescent Assay (DFA)

Culture (Growth)

Culturing *Legionella* is accomplished by inoculating a volume of the sample onto petri dishes containing a variety of specialized media, incubating for 10-14 days and examination for growth of these bacteria. This method is the definitive method for use during an outbreak or suspected case of Legionellosis because it is the only method which shows the presence of viable *Legionella* bacteria. These environmental "isolates" can be linked by public health officials to clinical isolates taken from infected individuals. This method can be used to obtain relative concentration information as well. The culture method is very specific for *Legionella* but, since many *Legionella* strains are unculturable, has low sensitivity.



Direct Fluorescent Assay (DFA)

Legionella bacteria present in a water sample are impinged onto a special filter, "stained" with a fluorochrome tagged antibody and observed microscopically. A special ultraviolet microscope is used (fluorescence microscopy) by which *legionella* bacteria with the tag fluoresce (glow), and can be readily seen and counted. Results from the DFA method can be available within hours after receipt. DFA is a convenient tool to use if you are trying to develop general occurrence/concentration data, and is an excellent way to evaluate multiple sample sites. This test does not rely upon growing the organism and does not assess viability. It can be a more sensitive test than the culture test but is subject to specificity of the antibodies. One authority has recommended that a level of 10^7 DFA positive *Legionella* cells per liter of cooling tower water be used as a "action level" for the remediation of *Legionella* from cooling towers.

CONTACT

Our laboratory personnel are committed to effectively responding to client needs and are dedicated to providing you with quality, defensible data. Please let us earn your business.

Call Customer Service at 1-800- GIARDIA (442-7342) to discuss your testing needs.