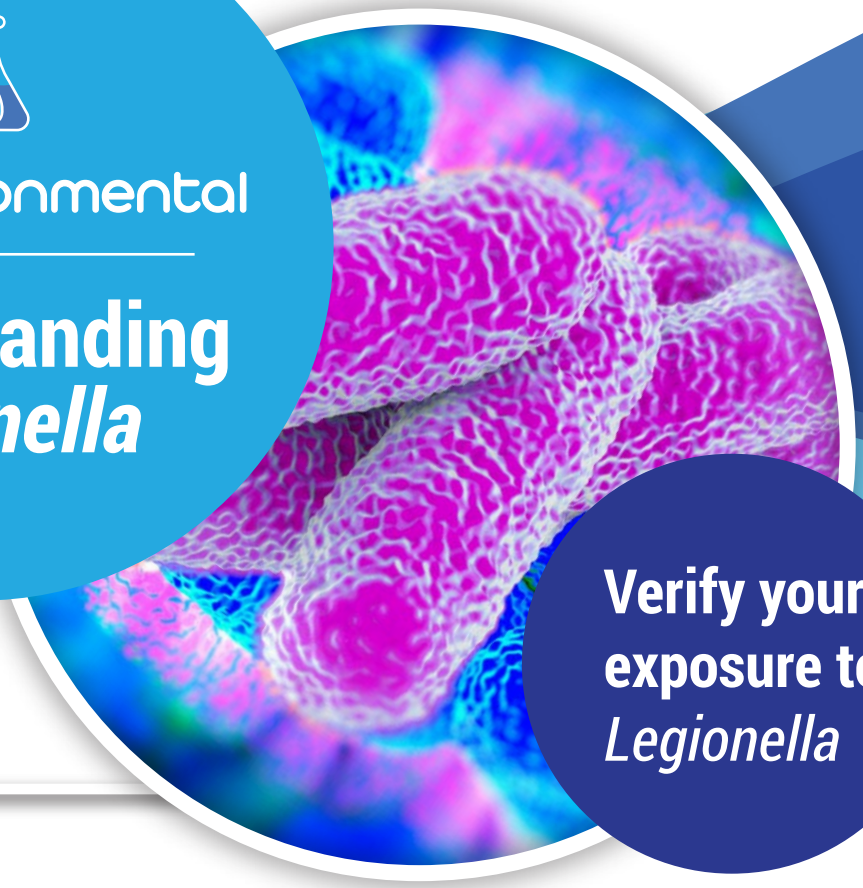
AG Environmental

Understanding *Legionella*



Verify your exposure to *Legionella*

AG Environmental is a leading-edge microbiology laboratory that utilizes the two most sanctioned methods (ISO11731 & Legiolert) to determine potential exposure to *Legionella*. In New York state, AG Environmental is accredited by the New York State Department of Health to use the ISO11731 *Legionella* culture method and outside New York state, we utilize IDEXX Laboratories' widely recognized Legiolert culture method for *Legionella pneumophila* quantification. These are the two most recognized and recommended methods to accurately determine your potential *Legionella* exposure and validate your disinfection treatment.

For healthcare facilities, AG Environmental Labs can help you stay in compliance with The Centers for Medicare & Medicaid Services (CMS) and the Veterans Health Administration (VHA) directives which mandate, all covered facilities such as, Hospitals, Nursing homes, Surgical centers, Dialysis centers and Residential health care facilities are required to assess and sample their water systems for *Legionella*, in order to reduce the risk of a potential outbreak. AG Environmental is uniquely qualified to meet all of your CMS and VHA water testing directives.

AG Environmental offers various solutions which would include:

- **Instruction of your designated staff to properly sample for *Legionella***
- **Simple and easy sample shipping logistics**
- **The latest state-of-the-art isolation and quantification laboratory testing methods**

AG Environmental is able to expertly provide your organization with the documentation to declare your water supply free from *Legionella* risk with confidence, thereby avoiding the significant legal and financial ramifications that are so commonly associated with this risk.

WHAT is *Legionella?*

Legionella is a group of bacteria that causes Legionnaires' disease, a deadly form of pneumonia. This disease can lead to a number of life-threatening complications, including:

Respiratory failure:
Where the lungs are no longer able to provide the body with enough oxygen or can't remove enough carbon dioxide from the blood.

Septic shock:
A severe, sudden drop in blood pressure reducing blood to vital organs, especially to the kidneys and brain.

Acute kidney failure:
The sudden loss of the kidneys' ability to perform their primary function - filtering metabolic waste from your blood.

When not treated effectively and promptly, Legionnaires' disease is often fatal, especially if your immune system is compromised by disease or medications.

WHERE does *Legionella* typically propagate?

Typically found in natural, freshwater environments, *Legionella* can be problematic in water systems. Most scenarios involve microscopic water droplets containing *Legionella* bacteria which can be dispersed in a variety of ways. Outbreaks have been linked to a wide range of water sources including:

Facilities

- ***Hospitals***
- ***Nursing Homes***
- ***Surgical Centers***
- ***Dialysis Centers***
- ***Residential Health Centers***
- ***Hotels***
- ***Cruise Ships***
- ***Water Parks***

Areas of Concern

- ***Showers and Facets***
- ***Cooling Towers and HVAC Systems***
- ***Whirlpools, Spas and Hot tubs***
- ***Hot Water Tanks and Heaters***
- ***Dental Hygiene Equipment***
- ***Swimming Pools***
- ***Misting Machinery***
- ***Decorative Fountains***

Legionnaires' outbreaks are an expanding problem throughout the country, and a particularly serious problem in hospitals, nursing homes, skilled nursing facilities as well as the hospitality industry. These are just a few of the higher risk facilities.

WHO is at risk?

Legionnaires' disease is transmitted by the inhalation of water-born bacteria. It is not transmitted by person-to-person contact. While not everyone exposed to *Legionella* bacteria acquires the disease, individuals are more vulnerable to infection if they:

Smoke. Smoking damages the lungs, making you more susceptible to all types of lung infections.

Have a weakened/compromised immune system possibly as a result of certain medications.

Have a chronic lung disease such as emphysema or another serious health condition such as diabetes, kidney disease or cancer.

Are Above 50 years of age due to commonly reduced immune response.

Are a patient with swallowing difficulties who can easily aspirate water into their lungs while simply drinking water.

HOW does *Legionella* contamination spread?

Legionella can easily grow and multiply in any poorly managed potable water system or HVAC system containing cooling towers. Warm water conditions provide the ideal environment for the bacteria to propagate. Seldomly used water system branches (like stagnant bathrooms or hotel rooms) are also areas of concern.

The bacteria live and grow in water systems at temperatures of 68 to 122 degrees Fahrenheit (optimal 95 degrees Fahrenheit). *Legionella* can survive and grow as parasites within free-living protozoa and within biofilms which contaminate water systems.

Don't be misled...

ON-SITE LEGIONELLA TESTING

On-site testing companies that offer to verify the presence of *Legionella* quickly are not recommended. This type of testing (called qPCR) is appropriate for identifying specific *Legionella* species during a disease-outbreak investigation, but not as a proactive method to determine *Legionella* risk. This is because qPCR does not differentiate between live or dead *Legionella*, potentially overstating your exposure, and unnecessarily expanding your remediation program.

WHY US

We offer certified *Legionella* exposure testing and disinfection verification for the safety of engineered water systems.
Our experienced *Legionella* experts can help you manage your water facilities and assist in meeting your requirements to maintain compliance with the law so you can keep a safe environment.
Our laboratory will guide you through the entire *Legionella* testing process which includes shipping sample bottles to the location of your choice. Once water samples have been collected (potable and non-potable samples) and shipped to our lab for analysis, we will quantify the extent of your present *Legionella* exposure.

CONTACT AG ENVIRONMENTAL FOR ADDITIONAL INFORMATION

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