

REDUCE YOUR **LEGIONELLA** RISK EXPOSURE. TEST YOUR WATER SYSTEMS AND KEEP YOUR BUSINESS IN THE SUCCESS ZONE.

FACT SHEET - 2021

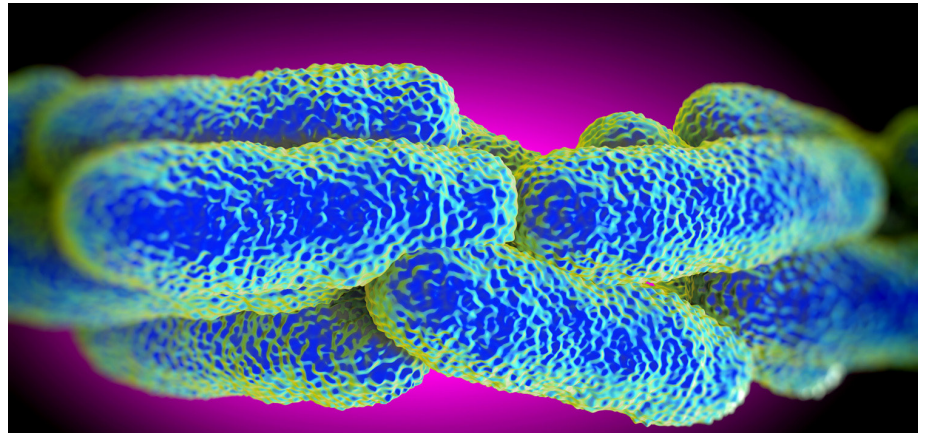
Potable and hot water systems can quickly become natural breeding grounds for legionella and other bacteria. Our Microbiology Services Team offers a wide range of analyses for both proactive and responsive legionella testing. We use the latest PCR method for rapid response and initial screening and follow up with the traditional analysis when a positive result is reported.

ABOUT LEGIONELLA?

Legionella is a bacterium that naturally occurs in freshwater environments worldwide, including streams, lakes, and mud. Legionella also can colonize human-made water systems like cooling towers, building water systems, evaporative condensers, and recreational structures such as jacuzzies and fountains. Incidences of legionella are increasingly being reported from human-made water structures and environments as testing becomes more refined.

Legionella pneumophila is the primary causative agent of legionellosis, which includes Legionnaires' disease and Pontiac fever. Legionnaires' disease is characterized by pneumonia, while Pontiac fever is characterized by a less severe influenza-like illness. Legionellosis is acquired when water containing legionella becomes aerosolized and is inhaled.

There are at least 50 species, and 70 serogroups of legionella identified to date. Identification of legionella to species and



serogroup differs from typical bacterial identification, requiring specialized media, culture conditions, and identification techniques.

KINDS OF TESTING

SGS can analyze your samples for the presence of legionella, using several methods developed by the laboratory.

Traditional analysis (Gold Standard) for legionella takes 7 to 14 days for positive identification and involves isolating the bacteria on specialized media utilizing the latex agglutination method. This process isolates and identifies only viable legionella and can identify legionella serogroupings 1 and 2-14.

Molecular analysis (PCR) can be reported in as little as 4-8 hours and quantifies all legionella in a sample, both viable and non-viable, but serogroups are not identified. Results for legionella species identification can be obtained quickly, allowing faster reaction time.

Veriflow® legionella is a molecular-based assay for the presumptive detection of legionella species in water and environmental swab samples without the need for enrichment. Veriflow technology is easily deployed in the lab setting, allowing technicians to identify the presence of legionella cells in under four hours from receipt of sample. A distinct advantage of the Veriflow DNA Signature Capturing method is the ability to accurately discern the presence of live versus dead cells, dramatically reducing the potential for false positive results.

There are advantages and disadvantages to the methods. The traditional culturing method offers the advantage of only quantifying viable legionella in the sample (as non-viable cells do not pose a health risk). However, culturing and identification are both more time consuming and expensive than PCR.

Combining methods may be the ultimate solution. Analysis with PCR can detect the presence of legionella rapidly, avoiding a

SGS

potential delay of two weeks waiting for results. Culturing can then verify viability and identify the species and serogroups of the legionella isolated.

SAMPLING KITS

Potable Waters

- Bottle Size: 1 Liter bottle
- Sampling Locations: Municipal Waters (hot water tanks), Hoses, Well Water, Faucets, Water Fountains, Sinks, Respiratory Therapy Equipment, Showers, Bottle Water or Cooler Water Systems, Eye Washers

Non-potable Waters

- Bottle Size: 250 ml
- Sampling Locations: Cooling Towers, Humidifiers, Decorative Fountains, HVAC Systems, Fire Sprinkler Systems, Storage Tanks, Basin Water, Hot Tubs, Surface Water from Reservoirs, Mistlers

Swabs

- Sterile Swab
- Sampling Locations: Faucet Aerators, Condensate Pan, Shower Heads, Condenser Coils

REPORTING LIMITS

Legionella - Traditional Culture (CDC Method) Reporting Limit 1 cfu

Legionella - Traditional Culture (ISO Method) Reporting Limit 1 cfu

WHY CHOOSE SGS

We are committed to achieving and maintaining the highest performance

standards in the industry. Our laboratories maintain exacting quality control programs and consistently demonstrate technical competence and compliance with industry standards, methods, and protocols. As a result, you can be confident you are working with a highly credible laboratory proficient at producing accurate data you can trust.

Let the experts at SGS assist you in the determination of the best strategy for your sampling and analysis of water-borne pathogens, specifically legionella.

SGS is the world's leading inspection, verification, testing and certification company. SGS is recognized as the global benchmark for quality and integrity. With more than 89,000 employees, SGS operates a network of over 2,600 offices and laboratories around the world.

**TO FIND OUT MORE ABOUT SGS
FORENSIC LABORATORIES SERVICES
CONTACT +1 800 827 3274,
EHS.CLIENTCARE@SGS.COM OR VISIT
WWW.SGSGALSON.COM/LEGIONELLA**

