

UNDERSTANDING LEGIONELLA TESTING

LEGIONNAIRES' DISEASE IN THE UNITED STATES

Legionnaires' outbreaks are common and have severe consequences, including death, costly legal settlements, facility downtime, and negative publicity.

550%

Rise in the number of reported Legionnaires' disease cases in the US. ¹

1100
Number of cases in 2000

7500

Number of cases in 2017



Up to **500K**

Estimated true number of Legionnaires' cases each year that are diagnosed as community-acquired pneumonia. ²



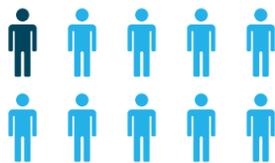
1 IN 3

Cooling towers are contaminated with Legionella. ³ Other high-risk water sources are potable water, showers, hot tubs, humidifiers and fountains.



10%

Fatality rate of Legionnaires' patients. ⁴ Overall, Legionnaires' kills more people annually than asbestos. ⁵



\$2.7M

Median settlement for an individual Legionnaires' lawsuit against a business. ⁶ Lawsuits attract negative PR.



CURRENT TESTING FAILS TO DETECT CONTAMINATION

Existing Legionella culture testing method is based on 150-year-old technology that is slow and inaccurate.

7 DAYS

Time it takes for Legionella to reach outbreak levels. ⁷



14 DAYS

Time it takes to get a lab culture result.



77%

Percentage of samples degrade during shipping to a lab. ⁸



62.5%

Culture's false negative rate due to bacterial degradation during shipping. ⁸

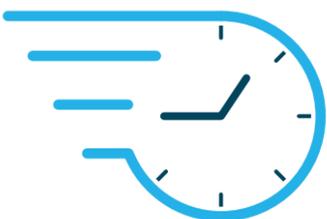


TIME FOR A CHANGE: ERADICATING LEGIONNAIRES'

On-site DNA testing uses Nobel-prize winning chemistry and unique filtering technology to detect the precise amount of Legionella in a water source.

45 MINUTES

Time for you to accurately detect Legionella bacteria in your building with on-site qPCR testing.



BENEFITS

- ✓ Detect and disinfect contamination in real time
- ✓ Save time and money preventing your risk
- ✓ Keep your occupants safe from Legionnaires' disease
- ✓ Treat low-level positives before they grow to outbreak levels, reducing your chemical use and extending your equipment lifetime
- ✓ Prevent the risk of Legionnaires'-related downtime in your facility
- ✓ No change to your existing action plan (1 GU/mL with Spartan = 1 CFU/mL with culture)

1. Centers for Disease Control and Prevention (CDC). (2018). *Legionnaires' disease history and patterns*. April 30.

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3. Llewellyn AC et al. (2017). Distribution of Legionella and bacterial community composition among regionally diverse US cooling towers. *PLoS One*. 12(12): e0189937.

4. Bartram J et al. (Eds.). (2007). Legionella and the prevention of legionellosis. *World Health Organization: WHO Press*.

5. Mazurek JM et al. (2017). Malignant mesothelioma mortality—United States, 1999–2015. *Morb Mortal Wkly Rep*. 66(8): 214-218.

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8. Ahmed S et al. (2019). Validation and in-field testing of a new on-site qPCR system for quantification of Legionella pneumophila according to ISO/TS 12869:2012 in HVAC cooling towers. *J Water Health*. 17(2): 237-253.