

## Monochloramine

Special Pathogens Laboratory conducted the first field trial in the United States to study the efficacy of a newly patented onsite generating monochloramine system.

Early results showed that this could effectively control Legionella in a hospital hot water system.

We continue to explore the impact and efficacy of monochloramine in subsequent ongoing studies.

SPL has evaluated all major Legionella disinfection technologies used today.

[Learn more.](#)

## Shift in the Microbial Ecology of a Hospital Hot Water System following the Introduction of an On-Site Monochloramine Disinfection System

Baron JL, Vikram A, Duda S, Stout JE, Bibby K (2014) PLoS ONE 9(7): e102679. doi:10.1371/journal.pone.0102679

Many facilities are considering applying secondary disinfection to water distribution systems to control Legionella. However, little is known about how these additives impact the microbial ecology. Using next generation molecular sequencing methods-high throughput Illumina 16S rRNA region sequencing and 454 sequencing, SPL evaluated samples from a hospital's hot water system treated with monochloramine. The results showed an immediate shift in the microbial population or microbiome. These techniques along with traditional culture, showed changes in Legionella, including rebound during a period of ineffective treatment. More studies on the microbiome of the built environment, an emerging field of study, are needed to understand the impact of different disinfection technologies on water systems.

## Evaluation of A New Monochloramine Generation System for Controlling Legionella in Building Hot Water Systems

Scott Duda, MS; Sheena Kandiah, MD, PhD; Janet E. Stout, PhD; et al Infection Control and Hospital Epidemiology November 2014, vol. 35, no. 11.

This is the first study in the U.S. to evaluate the efficacy of a new monochloramine generation system to control Legionella in a hospital hot water distribution system. SPL partnered with a local 459-bed hospital to conduct the 29-month study. The results showed a significant reduction of Legionella within the first week of application. Researchers observed no significant increase in other problematic microbial populations and none of the negative effects associated with monochloramine use in municipal cold water systems.

## Effect of Monochloramine Treatment on the Microbial Ecology of Legionella and Associated Bacterial Populations in a Hospital Hot Water System

JL Baron, JK Harris, J Stout, et al. Systematic and Applied Microbiology, Vol 38, Issue 3, May 2015.

Opportunistic pathogens, including Legionella spp. and non-tuberculous mycobacteria, can thrive in building hot water systems despite municipal and traditional on-site chlorine disinfection. This study looks at the microbiological impact from an onsite generated monochloramine used in a hospital hot water system. We compared the microbial ecology associated with monochloramine treatment against no on-site treatment to see if there were differences in the bacterial communities. Our results showed that the monochloramine had a major impact and dramatically changed the microbiome of the water system.

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**SPECIAL  
PATHOGENS  
LABORATORY**  
THE LEGIONELLA EXPERTS



- Legionella & Pathogen Testing
- Consulting & Education
- ZEROutbreak™ Protection

## Benefits of TLC

As a result of our integrated platform of Legionella and Pathogen Testing, Consulting and Education, and ZEROutbreak Protection Program, Special Pathogens Laboratory ensures three major benefits:

### Reliable Results

The challenge in detection is more than just finding levels of Legionella in your water. You need both accurate testing and results and correct interpretation for the risk of disease. Our testing methods are published in peer-reviewed journals and follow national industry and international standards for accuracy giving you the certainty required for reliable results and analysis.

### Outbreak Prevention

Our interdisciplinary team provides unmatched understanding of Legionella in building water systems and water supply technology to identify causes of risk and provide effective, immediate and long-term remedies.

### Liability Mitigation

Outbreaks are one of the most serious threats to an organization's reputation and liability insurance. Our ZEROutbreak™ certificate program provides science-based assurance that you have a water management program designed to prevent outbreaks of Legionnaires' disease.

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## Ensuring Your Reputation

We are proud of our "Zero-Outbreak" record that does more than just prevent outbreaks and mitigate risk. For health care, hospitality and commercial facilities and other industries, the ultimate risk is to an organization's reputation. A single case of Legionnaires' disease or outbreak is all it takes to destroy years of brand equity and confidence. Protecting your water from Legionella contamination can be a critical factor to your future success. Risking your reputation based on claims of speed or less accurate methods of detection is neither good public health policy nor business strategy.

Our ZEROutbreak™ Protection Program is a proven solution to prevent outbreaks through science-based testing, remediation and compliance. SPL's ZEROutbreak™ certificate provides protection through Total Legionella Control.

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