Spartan

ON-SITE LEGIONELLA qPCR TEST HELPS IDENTIFY FAULTY CHEMICAL DISPENSE VALVE

INTRODUCTION

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 188 contains guidance to help minimize the risk of Legionellosis in buildings, including water system maintenance, chemical treatment, and validation testing.[1]
- Typically, validation testing has been performed with Legionella culture. The major limitations of culture are: (1) too slow: results in 10-14 days, but Legionella can grow to outbreak levels in as few as 7 days,[2] and (2) inaccurate: the CDC has found that ELITE-certified labs undercount Legionella by an average of 17-fold and results differ between labs by 6-fold.[3]
- To solve the limitations of culture, Spartan Bioscience has developed the first on-site qPCR test that provides highly-accurate results in 45 minutes. It is the 2018 winner of the HVAC industry's top product innovation award for Indoor Air Quality (IAQ), as judged by ASHRAE.

"Spartan's on-site Legionella DNA test is an important tool to prevent Legionella risk."

- National Manager, Technical Services of a global real estate company

CASE STUDY

- A global real estate and property management company and a leader in innovative facilities management and environmental health and safety piloted Spartan's qPCR test in 2018.
- Over 4 months, the company performed 108 Spartan on-site qPCR tests in parallel with culture tests.
- All of the Spartan tests were negative with the exception of one result of 11 bacteria/mL, which is just above the actionable limit of Legionella. It turned out that this low-level Legionella contamination was due to a non-functioning chemical dispense valve. The water source was immediately disinfected and the valve was fixed.

CONCLUSION

- If the company had relied on its existing culture testing, it would have taken 17 days or longer before the problem was detected.
- Instead, Spartan's on-site test enabled the company to quickly identify the problem and fix it before low-level Legionella contamination could grow out of control.

REFERENCES

1. ASHRAE. (2018). *Legionellosis: Risk Management for Building Water Systems (Standard 188).*
2. Marshall AG, Bellucci EC. (1986). *Hospitality Review.* 1(4): Article 2.
3. Lucas CE, Taylor TH, Fields BS. (2011). *Water Res.* 45(15): 4428–4436.