

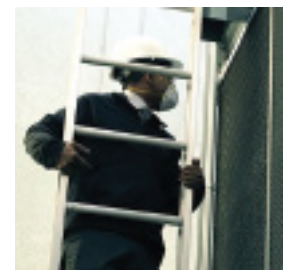
# LEGIONELLA TESTING ACTION PLAN

## Evaporative Cooling Systems

Regular Legionella testing can be part of a proactive approach towards preventing Legionnaires' disease (LD). Periodic sampling and testing is supported for systems where a **Legionella Risk Assessment** has determined it to be a wise risk reduction measure. Test result trends can generally indicate whether preventative measures are effective, and may be part of the ongoing validation of a **Water Safety Plan**.

The following should be noted with respect to *Legionella* testing:

- *Legionella* is native to all water supplies – positive results do not guarantee a LD outbreak, nor do negative results assure one will not occur.
- There is no known specific infectious density for Legionella in a water sample (i.e., concentration required to cause infection).
- Wide variability in test results and collection methods exists from one sample or lab to the next – consistently using the same collection method and testing laboratory can mitigate this.



**Before any Legionella testing is conducted, an action plan for disinfection should be in place in the event implementation of the procedure is required. This includes stocking the correct chemicals and equipment to carry out the procedure safely and effectively.**

RESPONSE	<i>Legionella</i> COUNT (CFU/mL)	RECOMMENDED PRACTICES
None	<10 (Not Detected)	<ul style="list-style-type: none"> <li>• Maintain treatment and maintenance program</li> </ul>
Program Review	10-100	<ul style="list-style-type: none"> <li>• Increase biocide dose and frequency</li> <li>• Review treatment and maintenance program</li> <li>• Retest and repeat as necessary until &lt;10</li> </ul>
Action Threshold	100-1000	<ul style="list-style-type: none"> <li>• Disinfect as per the AquaAnalytics Disinfection Procedure</li> <li>• Clean mechanical equipment where accessible</li> <li>• Increase biocide dose and frequency</li> <li>• Review treatment and maintenance program</li> <li>• Retest and repeat as necessary until &lt; 10</li> </ul>
Immediate Action (High Health Risk)	>10000	<ul style="list-style-type: none"> <li>• Implement immediate measures to minimize human exposure and eliminate aerosol dispersion</li> <li>• Disinfect as per the AquaAnalytics Disinfection Procedure</li> <li>• Clean mechanical equipment promptly</li> <li>• Review treatment and maintenance program</li> <li>• Retest and repeat as necessary until &lt; 10</li> </ul>

This action plan is based on *Legionella* 2003: "An Update and Statement by the Association of Water Technologies".



Although eliminating *Legionella* bacteria is the goal of all cooling water treatment biocide programs, eradicating *Legionella* is not possible. This bacteria is common in the environment and LD cases have not shown a reduction in frequency despite increased efforts over the last 20 years. Studies in hospitals have shown that on average, *Legionella* bacteria is present at a detectable level in over 50% of water samples taken in water distribution systems. The intent of this testing action plan is to act as a guideline for best practices on the recommended response to positive *Legionella* results.