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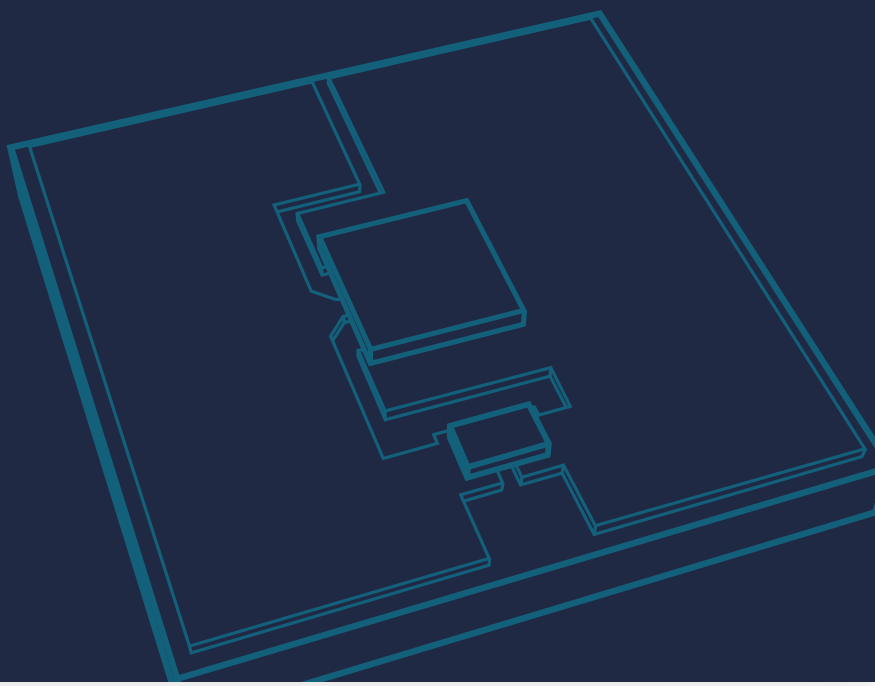

AN016

General Guidance for Testing Reactors Inside Water Cooler Systems: Field Applications

This document provides a protocol for testing the microbiological effectivity of Klaran water systems that has been installed in water cooler systems.

Disinfecting the Water Cooler System

1. Disinfect cooler with six to seven percent hydrogen peroxide (H_2O_2). Let it sit for 10 minutes and then rinse thoroughly with clean water.

2. The rinse water should be cultured to ensure it is not a source of contamination.

3. Connect the disinfected cooler to a water line.

Sampling Water from Water Cooler System for Microbial Tests

1. Take sample from all fittings (connectors, valves, etc.) and pump mechanism, culture the samples as a quality control for microbial contamination.

2. To minimize cross contamination when collecting water cooler system samples, obtain samples from longest paths first (e.g. Carbonated then chilled then ambient).

3. Flush with test water first when changing to a different pathway (e.g. when changing from sampling carbonated to chilled) to minimize carryover effect. Timing is important and you must understand the capacity of the tank and the pathway length to calculate volume and determine the timing between flushing and taking samples.

4. Obtain controls from the tank. If sampling for Pseudomonas, sampling and processing should preferably be done in the dark to contain photolyase activity (self-healing induced by visible light).

5. Process samples and incubate as required. Processing of samples is guideline and protocol specific. For instance, for EU, refer to EU guidelines (Council directive 98/83/EC) when sampling for Pseudomonas, Enterococcus, Coliforms. E. coli and HPC at 22°C and 37°C (three to seven days of incubation).

6. Record the results and analyze to confirm if the drinking water is within the standards (refer to local or regional standards).

Note: If transporting microbiology samples to an outside lab or from the field, please transport on ice. Refer to protocols, microbiological SOPs or regulatory standards for recommended media used for target microorganism, sample processing details, incubation temperature and duration.

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