

CheckLight's Biocide Activity Test

A 5 minutes on-site test that allows optimal chemical dosing and efficient operation of process equipment

Benefits

The CheckLight Biocide Activity test is a quick and simple “real-time” test to quantitatively measure biocide activity on site. It allows process operators of closed circuit process water systems to respond to changing conditions in real time rather than wait for 24-48 hours to obtain results from the standard test when damage may have already occurred.

Key Features

- **Fast** - results are obtained within 5 minutes.
- **Sensitive** - over a million fold dilution of biocides in the process water still activates the biosensors to generate accurate real time readings needed for precise quantitative biocide chemical dosing management.
- **User-friendly** - a simple three-step procedure that can be performed under field conditions in ambient temperature (20-35°C).
- **Reliable** - very good correlation readings were obtained against the standard 24-48hrs tests.
- **Cost effective** – enables considerable chemical cost savings due to optimized biocide use with no under/over dosing as well as operational savings from avoiding maintenance and equipment down-time associated with uncontrolled biocide activity.

Function & Application

Many operational problems associated with industrial cooling and heating water systems, fuel storage tanks, pulp and paper slurries, metal-working cooling fluids etc., are caused by the unwanted presence of algae, fungi and bacteria in the process water. Many different bacteria species may exist in these systems and cause plugging,



fouling, under-deposit corrosion and health hazards. Preventing these problems usually involves adding different kinds of biocides to the process water on a routine basis to ensure that they effectively and continuously destroy the pollutants. It is very important to periodically monitor water to make sure that there is no under (leading to microbial outbreak) or over (leading to unnecessary expenses) dosing of the chemicals.

The most commonly applied test for biocide activity in water only measures the effect of the biocide on the viability of a few selected bacterial strains. It is tedious and requires 24-48 hours for the results to be available so that by the time they are known damage could have already been done to the process equipment.

CheckLight's test is based on luminescent bacteria. The user is provided with freeze-dried cells that upon hydration and exposure to the sampled water respond by lowering their light level in proportion to the concentration of the biocidic agent. Only minimal lab experience is necessary to carry out the test. The test kit includes freeze dried bacteria, assay buffers and empty test tubes. A luminometer (should be purchased separately) is needed to read the results.

Only 1mL of sample is necessary to run the assay, making collection, storage, and disposal of sample material easy and cheap.

The test can be used by system operators or service providers for cooling towers & boilers, as well as for the pulp & paper manufacture, metal cooling fluids, food industry etc.



Ordering information

Product	Description	Quantity	Catalog #
Biocide Activity	Biosensor vials	6 units	BIO1006
Test Kit	Assay Buffer	100 ml	
	Hydration Buffer	6 ml	
	Empty test vials	500 units	

Note: for Luminometer details, consult specific data sheet. For other accessories and options consult CheckLight's full product list.

CheckLight Ltd. 7/2007 Version E-2.0.

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