

CSTB
le futur en construction

> *Legionella pneumophila*

Alphéo: a unique experimental tool for testing the effectiveness of innovative biocides in water systems

Installed at the CSTB in Nantes, the Alphéo test bench contaminated by *Legionella pneumophila* enables full-scale testing of the performance of products and systems for Legionella control.



STRENGTHS

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Realistic test conditions

- 316 L stainless steel system
- Domestic hot/cold water kept at 37°C
- 13 ± 1 L/min. flow rate

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Reliability and modularity

- Fully automated
- 4 separate 30-m piping systems with 14-liter capacity

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Water and biofilm sampling points

- 1 sampling point on each loop
- 1 dead leg on each piping system
- 1 biofilm collector per piping system consisting of 10 coupons

3-STAGE PROTOCOL

Tool listed in the ECHA guide, "Guidance on the Biocidal Products Regulation Volume II Efficacy – Assessment and Evaluation (Parts B+C), Version 3.0, April 2018"

- 1 -

CHECK OF PREREQUISITES

- Stable levels of *Legionella pneumophila* over a period of 2 to 3 months
 - High enough levels of *Legionella pneumophila* (105 CFU/L)

- 2 -

SETUP OF PRODUCT OR TREATMENT SYSTEM

- 1 control piping system
- 1 treated piping system (option to duplicate the testing)

- 3 -

MONITORING OF WATER QUALITY FOR 3 TO 6 MONTHS

- *Legionella pneumophila* contamination of water and the biofilm
 - Water quality parameters associated with treatment

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