

IMCLO Bio-Box

A simple method for monitoring and demonstrating the tendency for biofouling



Essential expertise for
improving chlorine biocontrol performance.

IMCHLO

- Visible fouling helps to communicate the need for treatment and or treatment results.
- A simple way of monitoring indicates that treatment changes are effective.
- Monitoring and analysis help find problems before condensers or tower fill are fouled. This can save the energy costs and manpower required to clean systems or tower fill and reduce health risks.
- The simple method means little time is spent on complicated analysis or equipment maintenance.

Description

The Bio-Box (Figure 1) can provide a visual means of monitoring fouling in systems that are closed and difficult to inspect. Microorganisms will grow on the box and the microscope slides. As they grow, they will form a biofilm. Once the biofilm exceeds 50 microns (0.05 mm), it will become visible to anyone inspecting the box. Any buildup in the Bio-Box will indicate the need for improved bacteria control and/or dispersancy.

The microorganisms growing on the slide can easily be monitored. Options are:

1. removing a slide from the box and measure the colonies via a DIP slide after extracion.
2. Remove a slide and examine it under a microscope.
3. A more detailed analysis can be made by a microbiology service. Simply collect the slide and put it into a 50 mL centrifuge tube and fill it with system water. Fill a second tube with system water aswell. Then, seal each tube in a Whirl Pak Bag and send to a competent Bio analyzer lab.

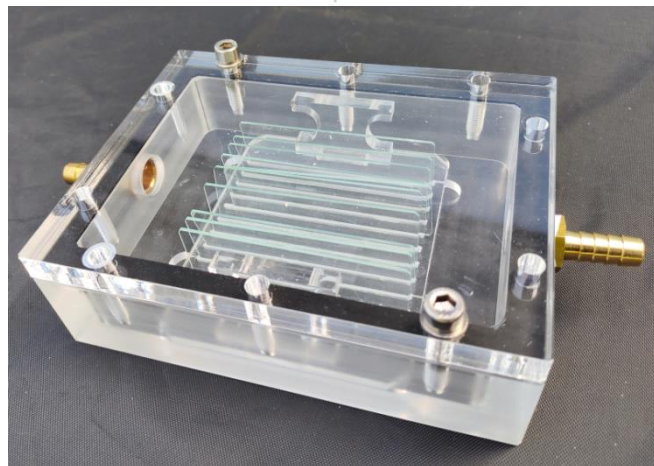


Figure 1 — IMCHLO Bio-Box

Support

If you have any questions regarding this specification, please contact IMCHLO.

Specifications

Box: 11.5 x 15 cm Plexiglas box

Slideholder: Holds 10 microscope slides, slots are 1 mm W, 3 mm D

Slides: 25 x 75 x 1 mm

Fittings: 0.95 cm (3/8") hose barb

Pressure Rating: 1,3–1,5 Barg

Installation

Simply insert ten microscope slides into the grooves in the slide holder. Install the cover and connect the box to a system sidestream with a flow rate of 3 to 12 lpm. Route the outlet flow back to the system or to a drain if the blowdown rate allows. The Bio-Box is most effective if it is installed near a low flow area, an area with a tendency to foul, or near a critical heat exchanger.



Essential expertise for
improving chlorine
biocontrol performance.

IMCHLO

Ing. Liévin De Vriese MSc.
Industrial Water Professional

mobile: +32 (0) 473 72 12 46
E-mail: lievin.de.vriese@imchlo.be
www.imchlo.be