



BIOHAP

ENVIRONMENTAL SOLUTIONS

Biobased filter media specific to heavy metals

Who we are ?

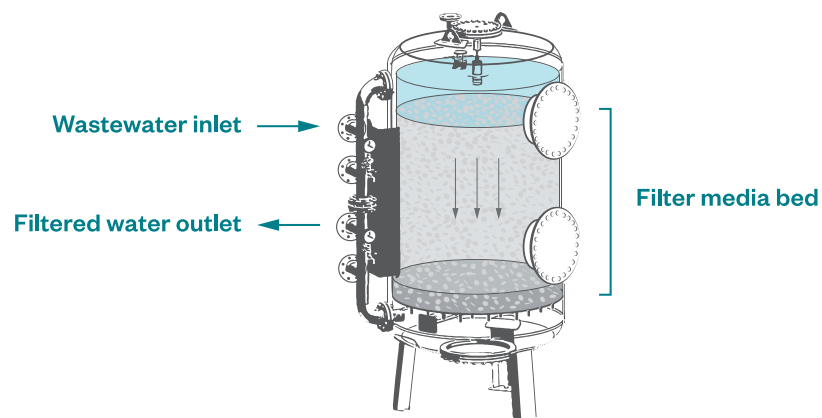
BIOHAP is a french start-up **developing and manufacturing sustainable environmental solutions.**

Its first innovation is a **biosourced filter media specific for heavy metals in water** (lead, manganese, nickel, copper, cadmium, zinc, etc.).



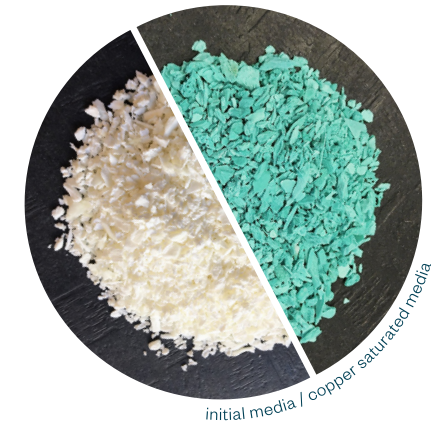
Technical principle

The water to be treated flows through a cylinder full of filter media. As it passes through the bed, **the water is freed from its metals.** This treatment is generally used at the end of a water treatment line as a finishing treatment on clarified water.



Benefits of the media

- **Filter bioceramic, eco-designed and biosourced**
- **High metal selectivity** : Pb, Cd, Cu, Zn, etc.
- Able to **treat elements in trace quantities in water (a few µg/L)**
- **Applicable to high water flow rates**
- **High retention capacity** : 80 to 200 kg of metals per ton of filter media.



Examples

(with a single 5 minutes pass through the cartridge)

	BEFORE TREATMENT		AFTER TREATMENT
Wastewater from industrial polishing	2,3 mg/L 0,7 mg/L	- 98,7 % copper zinc	0,03 mg/L < quantification limit
Wastewater from electrical cable production industry, contaminated with zinc and copper	117 µg/L 296 µg/L	- 94 % zinc - 69,5 % copper	10 µg/L 90 µg/L
Wastewater from a metallurgical plant, contaminated with zinc, cadmium, mercury and lead	155 µg/L < 3 µg/L 4 µg/L 20 µg/L	- 80,5 % zinc cadmium mercury lead	30 µg/L < quantification limit
Ultra-filtered water with residual zinc	570 µg/L	- 99,6 % zinc	2 µg/L

4 step water treatment



1. **Discuss** your requirements

You'd like to try out water treatment with our product ? **Schedule an appointment online to better understand your needs and preferences.** To do this, visit **the BIOHAP's online appointments booking** via the QR code opposite.

2. **Send** 5 liters of water

A first free test is carried out on a lab prototype, using 5 liters of your water. This test, carrying no commitment, gives you **an idea of the efficiency of the treatment** on your sample. If this experiment is conclusive, a second test will be offered in your actual plant conditions.



3. **Install** a pilot on your plant

To best dimension the solution for treating all of your flows, **a miniature installation is placed on your plant.** Several installation sizes are possible, with flow rates from a dozen to 200 liters per hour. The effectiveness of the treatment is monitored by analyzing samples taken at the input and output of the pilot.



4. **Treat** all your water flow

An installation is set up on your site to treat all your water. Plug and play filters are interchanged to replace saturated media. On larger installations, a suction and media replacement service can be offered.





BIOHAP
ENVIRONMENTAL SOLUTIONS

contact@biohap.fr
65 rue de Saint-Brieuc
35000 RENNES
FRANCE

www.biohap.fr

Information & contact



EmergysBretagne
INCUBATEUR D'ENTREPRISES INNOVANTES

INRAE

