

# **IMPACT OF POLLUTANTS METAL (CU, ZN AND CADMIUM) ON BACTERIAL AND ALGAL BIOMASS IN A LAGOON WASTEWATER**

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## **Abstract:**

Population growth and the development of industry and agriculture exert considerable pressure on the environment, particularly through the large volume of wastewater generated. Indeed, the wastewater treatment is intended to reduce pollution of the waters and in order to ensure that they do not pose a threat to aquatic ecosystems (eutrophication, contamination by micro organisms or heavy metals).

However, in natural aquatic ecosystems, heavy metals are found at low concentrations, typically in the range of nanograms or micrograms per liter. But, unlike other pollutants, such as hydrocarbons derived from petroleum, and waste that invade the environment, the heavy metals accumulate and eventually reach toxic levels.

Because of their bioaccumulation, they present a persistent danger to the ecosystem that is developing in the natural lagoon (algae and bacteria), although these micro organisms have a natural purification power against these toxic substances.

In this regard, the methodological approach developed in this study combines two distinct parts. The first one focuses on the evaluation of the purification performance of the natural lagooning pilot installed in the open air. The second part aims to study the impact of pollutants metal (copper, zinc and cadmium) on biodiversity and physico-chemical parameters of lagoon water.

**Keywords:** Aerated lagoons, heavy metals, bioaccumulation, algal and bacteria/ biomass

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