

Title: ISOLATION AND GROWING OF *Microcystis aeruginosa* FROM PISCICULTURE TANKS IN MACAPÁ-AP

Authors Almeida, G. F.¹, FAUSTINO, S. M. M.¹

Institution ¹ UNIFAP – Universidade Federal do Amapá (Juscelino Kubitschek Road, KM-02, Jardim Marco Zero, Macapá-AP)

Abstract:

Cyanobacteria are prokaryote photosynthetic autotroph micro-organisms. Their vital processes require only water, carbon dioxide, inorganic substances and light, besides, they can produce toxins. Cyanotoxins are many and can be classified according to their action mechanisms and represent different problems, not only organisms to aquatic environments, but also to human beings. There are many species which produce cyanotoxins, however, currently, we highlight the species *Microcystis aeruginosa*, being more frequently related to the occurrence of toxic flowering in all the world, because it's a microcystins producer and it exhibits hepatotoxic potential linked to the minimal lethal shot. In face of that, to understand the species and its characteristics this study made the collect and growing (assessment of the growing behavior differences and nutritional conditions) in BG-11 and ASM-1. The collect of cyanobacteria was made with the help of a phytoplankton net with 20 µm, that had a collector body which concentrate material, through horizontal push on the water surface, from July to August, 2014. The species isolation was made after many dilutions in distilled water with the help of a Pasteur pipette, observing the samples in a inverted microscope. The assessed pisciculture tanks present some singularities of eutrophic environments. There haven't been significate variables related to the to the researched tank temperature conditions. In the beginning, it was identified the presence of *Geitlerinema sp* during the first attempts of isolation of the researched species. The strains of *Microcystis aeruginosa* were isolated in the laboratory in liquid containing the culture environment BG-11. The colonies measured from 10 µm to 25 µm, a number reasonably higher when compared to that described in the literature, denoting a robust line on the studied region. It's necessary to highlight that the different conditions and growing environments can favor alterations in morphologic and physiologic characters the cultures accomplished in a solid way didn't succeed in the BG-11 environment, because there was no growing. In the ASM-1 environment there was growing, but *Microcystis aeruginosa* wasn't the predominant species, it was the chlorophytes. In nurseries and tanks of piscicultures it's necessary the accompaniment of the seasonality of proliferation of these organisms to the prevention of potential risks to the people's health.

Key-words: Cyanobacteria. Flowering. Microcystins