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“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

## Microorganisms Growth Rate Evaluation and Proposal of Model for Biomass Production of *Haematococcus pluvialis*

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### Abstract

The use of microalgae for production of biofuels has been pointed by many researchers as essential to reduce the emissions of gases that cause global warming. Microalgae cultivation can act in the process of CO<sub>2</sub> sequestration and the biomass formed can be used to replace fossil fuels. Thus, the interest in optimization of the microalgae cultivation is not only in high added value products but also in the formation of biofuels. This paper presents a study the growth of microalga *Haematococcus pluvialis* considering light conditions equal to 10000 lux, temperature 298 ± 1 K and pH in the range 7-9. The formation of biomass was evaluated by an exponential model where the parameters were adjusted in order to describe the growth of the microalgae over time.

**Keywords:** *biomass of microalge, growth rate, Haematococcus pluvialis, modeling.*

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