

MICRO'99
CONGRESSO NACIONAL
DE
MICROBIOLOGIA



1 a 4 de Dezembro de 1999

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CONGRESSO NACIONAL DE MICROBIOLOGIA

MICRO'99

Programa e Sumários do Congresso
Nacional de Microbiologia MICRO'99,
organizado pela Sociedade Portuguesa
de Microbiologia

LUSO
1- 4 Dezembro de 1999

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SELECTION OF BUFFERS FOR CULTIVATION OF *Pavlova lutheri*

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The pH of a culture medium undergoes drastic changes when microalgae are cultivated therein, owing to excretion of metabolites and incorporation of nutrients (e.g. nitrate) by the microalga. Since each microalga has its own pH tolerance, and exhibits poor growth (or even lysis) when a given pH range is exceeded, it is important to prevent such extreme pH values. The usual method employed to control pH consists in supplementing the medium culture with a buffer, i.e. a weak acid/base pair with the capability of resisting to variations in pH resulting from the addition of small amounts of acids or alkalis.

Despite this general behaviour, microalgae react differently in the presence of distinct buffers; hence, the selection of the most appropriate to a specific microalga is a crucial step in the development of optimal growth conditions.

In this experimental work, a factorial design using three buffer compounds (glycylglycine, glycine, and Tris-HCl) in two concentrations (8 and 12 mM) was executed in a culture of the microalga *Pavlova lutheri*. Results showed that Tris-HCl is more suitable for this culture, since the use of glycylglycine is toxic to the cells.