

ISOLATION OF SEA WATER BACTERIA
AND IDENTIFICATION OF *CAGLIIONEMA*
SIMPLEX

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Manipulation of sea water for growth and proliferation of
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MANIPULATION OF SEA WATER FOR GROWTH AND PROLIFERATION OF
AGLAONEMA SIMPLEX

By

Sitty Nur Syafa Bakri

Research Report submitted in partial fulfillment of
the requirements for the degree of
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**PENGAKUAN DAN PENGESAHAN LAPORAN
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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **MANIPULATION OF SEAWATER FOR GROWTH AND PROLIFERATION OF *Aglaonema simplex*** oleh **SITTY NUR SYAFA BAKRI**, no. matrik: **UK 9004** telah diperiksa dan semua pembedaan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh ijazah **SARJANA MUDA SAINS (SAINS BIOLOGI)**, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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LIST OF ABBREVIATIONS

cm	-	centimeter
g	-	gram
mM	-	mili Molar
M	-	Molar
ppt	-	part per trillion
°C	-	celcius
%	-	percentage

ABSTRACT

The manipulation of seawater for growth and proliferation of *Aglaonema simplex* was investigated. The research was done successfully using various concentrations of seawater. For determination of suitable seawater for plant growth, 0, 3, 5, 10 and 15 ppt was manipulated for 1, 3, 7, 15 and 30 days. Media MS (Murashige and Skoog, 1962) was used as control (0 ppt). The survival rate of the plant was used as parameter to choose the suitable seawater. The suitable seawater, (3, 5, and 10 ppt) were than manipulated. The survival rate, mean fresh weight and number of new plantlet were the parameters used to determine effect of seawater to *A. simplex* and observed every 10 for 30 days of treatment. The results showed that 3, 5 and 10 ppt of seawater were suitable salinity to growth and proliferation of the plants. Besides, EDTA or ethylene diamine tetra acetate acid also manipulated during this research in order to buffer the ions of seawater. All the parameters that had been observed show no significance found.

MANIPULASI AIR LAUT UNTUK PERTUMBUHAN DAN PROLIFERASI

Aglaonema simplex

ABSTRAK

Air laut telah dimanipulasikan untuk mengkaji kesan air laut keatas pertumbuhan pokok *Aglaonema simplex*. Kajian ini dijalankan menggunakan pelbagai kepekatan air laut. Bagi penentuan air laut yang sesuai untuk pertumbuhan pokok, 0, 3, 5, 10 dan 15ppt telah diuji untuk 1,3,7,15 dan 30 hari. MS media (Murashige and Skoog, 1962) telah digunakan sebagai kawalan (0 ppt). Air laut yang sesuai ditentukan berdasarkan kebolehan pokok untuk hidup pada kepekatan yang diuji. Seterusnya, Kepekatan air laut yang sesuai (3, 5 dan 10 ppt) dimanipulasi. Bilangan pokok yang hidup, mean berat basah dan bilangan anak pokok baru yang tumbuh adalah parameter yang diperhatikan untuk menentukan kesan air laut keatas *A. simplex*. Ini diperhatikan setiap 10 hari selama 30 hari. Keputusan menunjukkan 3, 5 dan 10 ppt air laut adalah sesuai untuk pertumbuhan dan pertambahan pokok *A. simplex*. Disamping itu, EDTA atau asid etilin diammin tetra asetat turut dimanipulasikan untuk menyeimbangkan ion-ion yang terdapat pada air laut. Didapati, tiada perbezaan yang ketara wujud antara parameter yang diperhatikan.