INDUCTION AND ESTABLISHMENT OF IN VITRO CULTURE OF *Etlingera maingayi*

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Induction and establishment of in vitro culture of hanguana malayana / Mohd Nasir Ahmad Tajudin.

Lihat sebelah

INDUCTION AND ESTABLISHMENT OF IN VITRO CULTURE OF *Hanguana malayana.*

By

Mohd Nasir bin Ahmad Tajudin

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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **Induction and establishment of in vitro culture of *Hanguana malayana*** oleh **Mohd Nasir Bin Ahmad Tajudin** No. Matrik **Uk 6624** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi **Ijazah Sarjana muda sains Sains biologi** Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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the special person, without you, the results will be nothing, but just only like a body without a soul.

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BAP	-	Benzylaminopurine
HCL	-	Hydrochloric acid
H_2O_2	-	Hydrogen peroxide
Kin	-	Kinetin
L-AA	-	L-Ascorbic acid
M	-	Molar
mg/l	-	Milligram per liter
NaOH	-	Natrium hydrochloride
$O\cdot_2^-$	-	Superoxide
$OH\cdot$	-	Hydroxyl radical
ROS	-	Reactive oxygen species

ABSTRACT

Attempt was made to establish on in vitro culture of *Hanguana malayana*. The surface sterilization practices were successfully obtained by using 30% (v/v) of Clorox with 30 minutes of immersion. Initiation of shoot cultures was established by addition of 1g/l of activated charcoal into media, 100 mg/l of L-ascorbic acid and 100 mg/l of gentamicin sulphate has been treated to the explants body. Two types of explants, adventitious shoots and shooting tips were used. The adventitious shoot was most successful. The percentage of no contaminant was 75% obtained from 250 of adventitious shoot cultured compared to only 57.14% by shooting tips. The problem interfering during the inoculation stage that could be observed was the high rate of contamination and the naturally occurring of oxidative stress.

ABSTRAK

Usaha untuk mendapatkan kultur in vitro pokok *Hanguana malayana* telah berjaya dilakukan. Kadar pensterilan yang optimum didapati dengan menggunakan 30% (v/v) klorox, direndam selama 20 minit. Permulaan bagi pertumbuhan kultur pokok pada masa kajian telah dilakukan dengan menambahkan 1 g/l arang teraktif ke dalam media, 100 mg/l L-ascorbic acid dan 100 mg/l gentamicin sulfat digunakan bagi merawat tumbuhan. Dua jenis ekplan telah digunakan iaitu tunas sisi dan tunas pucuk. Tunas sisi merupakan eksplant yang paling berjaya. Peratusan tanpa sebarang kontaminasi adalah 75% berbanding tunas pucuk yang hanya mencapai 57.14%. Masalah yang sering timbul ketika pengkulturan tisu tumbuhan ini ialah kadar kontaminasi yang tinggi dan tekanan oksidatif yang dialami oleh tisu yang dikulturkan.