

THE EFFECT OF AMINO ACID SUPPLEMENTS ON THE GROWTH OF  
*Chytococcus affinis*

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**THE EFFECT OF AUXIN ON IN VITRO CULTURES OF *Cryptocoryne ciliata***

**By**

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

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## LIST OF SYMBOLS

cm	centimeter
m	meter
ppm	parts per milion
%	percentage
kPa	kiloPascal
<sup>0</sup> C	degree celcius
v/v	volume per volume
rpm	round per minute
nm	nanometer
mg	milligram
ml	milliliter
μg	microgram
μl	microliter
mM	miliMolar
BAP	benzylaminopurine
IAA	indole acetic acid
NAA	naphthalene acetic acid
IBA	indole butyric acid
HCl	hidrocloric Acid
NaOH	natrium Hydroxide
MS	media Murashige and Skoog

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# KESAN AUKSIN DALAM IN VITRO KULTUR DALAM *Cryptocoryne ciliata*

## ABSTRAK

Kajian ini telah dijalankan untuk menentukan kesan auksin dan kepekatan auksin yang sesuai terhadap in vitro kultur dalam *Cryptocoryne ciliata*. Pertumbuhan (berat basah dan berat kering), kandungan gula penurun dan protein terlarut telah dikaji bagi tumbuhan selepas 30 hari. Penambahan pelbagai jenis auksin ke dalam medium didapati telah mencetuskan akar pada eksplan. Kandungan protein terlarut didapati rendah pada kepekatan auxin yang tinggi (0.6 mg/l dan 0.8 mg/l). Sebaliknya, kandungan gula didapati telah meningkat tanpa kehadiran BAP dalam media rawatan. Auksin yang sesuai dalam kajian ini adalah 0.5mg/l IBA dengan BAP dan untuk tanpa auksin adalah IAA 1.0 mg/l.

## ABSTRACT

A study was conducted mainly to determine the effect of auxin on *in vitro* cultures of *Cryptocoryne ciliata*. The growth (fresh and dry weight), reducing sugar, and total soluble protein were determined after 30 days of treatment. The addition of different types of auxin with different concentrations induced root formation differentially. The type of auxin used were indole acetic acid (IAA), naphthalene acetic acid (NAA) and indole butyric acid (IBA). The protein content was low for high levels of concentration of auxin IAA and IBA (0.6 mg/l and 0.8 mg/l). The reducing sugar content was high without the presence of benzylaminopurine (BAP) in the medium. The suitable auxin for root induction was 0.5 mg/l IBA (with BAP) and in the absence of benzylaminopurine (BAP), the preferred auxin was IAA with 1.0 mg/l concentration.