

ANALISIS DAN PEMERIKSAAN
KANDUNGAN NUTRISI DAN FARMASOKOLOGIS
DARI EKSTRAK BUNYI DAN BAKULI
DARI *CRIPTOCORNE ELLIPTICA*

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MANIPULATION OF MEDIUM FOR PROLIFERATION OF
CRYPTOCORYNE ELLIPTICA

By

Salmi Bt Mat Dahan @ Abdullah

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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk 'MANIPULATION OF MEDIUM FOR PROLIFERATION OF *CRYPTOCORYNE ELLIPTICA*' oleh SALMI BINTI MAT DAHAN @ ABDULLAH no. matrik UK7812 telah diperiksa dan semua pembetulan 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

| | | |
|-------------------|---|------------------------|
| % | - | Percentage |
| BAP | - | 6-Benzylaminopurine |
| KIN | - | 6-Furfurylaminopurine |
| 2iP | - | 2-Isopentenyladenine |
| mgL ⁻¹ | - | Milligram per liter |
| kPa | - | Kilo Pascal |
| gL ⁻¹ | - | Gram per liter |
| μm | - | Micrometer |
| °C | - | Degree of Celcius |
| PGR | - | Plant growth regulator |
| GA | - | Gibberellin |

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ABSTRACT

The study of *Cryptocoryne elliptica* for plantlets and roots proliferations in vitro was established on full and half strength of B5 media. The media were added with cytokinin (BAP, KIN, 2ip, zeatin) at concentrations of 0.1, 0.3, 0.5 and 1 mgL⁻¹, respectively. Full strength of B5 media displayed the formation of plantlets and roots was favor on 0.5mgL⁻¹ BAP with 3.4 plantlets per explant (p>0.05) and 0.1mgL⁻¹ KIN with 5.0 roots per explant (p<0.05). Cultures on half strength of B5 media was better than full strength B5 media with 0.3mgL⁻¹ of KIN showed the best proliferations for plantlets with 3.4 plantlet per explant (p>0.05) and 0.5mgL⁻¹ of KIN promotes the highest rate of roots formations with 5.8 roots per explant (p<0.05). The growth of cultures on full strength of B5 media added with 0.1, 0.3, 0.5 and 1 mgL⁻¹ concentrations of GA was also investigated. The best petiole elongation was observed in 0.5mgL⁻¹ GA with 0.74 centimeters per explant (p>0.05). The proliferation *C. elliptica* can be induced by low concentration of cytokinin.

KESAN MEDIA TERHADAP PERTUMBUHAN *Cryptocoryne elliptica*

ABSTRAK

Kajian mengenai pertumbuhan anak pokok dan akar secara *in vitro* berjaya dikulturkan di atas B5 media (Gamborg *et al.*, 1968) dengan kepekatan penuh dan separuh. Media ditambah dengan sitokinin (BAP, KIN, 2ip, zeatin) pada kepekatan 0.1, 0.3, 0.5 and 1.0 mgL⁻¹ secara berasingan. Media B5 yang berkepekatan penuh menunjukkan pertumbuhan anak pokok dan akar yang tinggi dengan 0.5mgL⁻¹ BAP iaitu 3.4 anak pokok ($p>0.05$) dan 1.0 mgL⁻¹ iaitu 5.0 akar ($p<0.05$). Kultur pada media B5 kepekatan separuh menunjukkan keputusan yang lebih baik berbanding media B5 kepekatan penuh pada 0.3mgL⁻¹ KIN menunjukkan pertumbuhan baik untuk anak pokok iaitu 3.4 anak pokok ($p>0.05$) dan 0.5mgL⁻¹ KIN bagi pertumbuhan akar dengan 5.8 akar ($p<0.05$). Pertumbuhan pada kultur kepekatan penuh media B5 yang ditambahkan dengan hormon gibberellin pada kepekatan 0.1, 0.3, 0.5 and 1 mgL⁻¹ juga dikaji. Pemanjangan petiol yang terbaik dapat dilihat pada 0.5mgL⁻¹ GA dengan 0.74 sentimeter per anak pokok.