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CRYPTOCORYNE BALANSAE

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Manipulation of medium for proliferation of Cryptocoryne Elliptica / Yong Hasnah Hamadan.

MANIPULATION OF MEDIUM FOR PROLIFERATION OF *CRYPTOCORYNE ELLIPTICA*

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MANIPULATION OF MEDIUM FOR PROLIFERATION OF *CRYPTOCORYNE ELLIPTICA*

By

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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 YONG HASNAH BINTI HAMADAN no. matrik UK8262 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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NH_4^+	-	ammonium
NO^{3-}	-	nitrate
ATP	-	adenosine triphosphate
g/L	-	gram per liter
^oC	-	degree Celcius
KNO_3	-	potassium nitrate
$(NH_4)_2SO_4$	-	ammonium sulphate
mM	-	milimolar
NaH_2PO_4	-	monosodium phosphate
KH_2PO_4	-	monopotassium phosphate
ANOVA	-	analysis of variance

ABSTRACT

The effect of nitrogen (N) and phosphate (P) source in culture using B5 medium for proliferation of *Cryptocoryne elliptica* were studied. The growth of new leaves, new roots, new shoots and new plantlets were measured once a week in four weeks interval. For effect of nitrogen, NO^{3-} and NH_4^+ were used at of NH_4^+:NO^{3-} (mM) = 0:0, 0:25, 0:50, 0:75, 2:0, 2:25, 2:50, 2:75, 4:0, 4:25, 4:50, 4:75, 6:0, 6:25, 6:50 and 6:75, respectively. The best growth was obtained in NH_4^+ : NO^{3-} = 6 : 50 mM with mean number of shoot, 0.86, root, 2.00, plantlet ,0.71 and leaves, 0.86. The effect of phosphate, were tested at 4, 6 and 8 mM, respectively. The highest growths were obtained in 6 mM of phosphate with mean number of shoot, 2.00, leaves, 2.00, plantlet, 2.71 and root, 3.43. Different concentration of phosphate supplied do not significantly affected the growth of *C.elliptica* with $P<0.05$.

ABSTRAK

Kajian ke atas kesan sumber nitrogen dan fosfat terhadap pertumbuhan pokok *Cryptocoryne elliptica* telah dijalankan di dalam kultur menggunakan medium B5. Pertumbuhan daun baru, akar baru, pucuk baru dan anak pokok diukur setiap minggu selama empat minggu. Bagi kesan nitrogen NH_4^+ dan NO^{3-} telah digunakan pada kadaran NH_4^+: NO^{3-} (mM) = 0:0, 0:25, 0:50, 0:75, 2:0, 2:25, 2:50, 2:75, 4:0, 4:25, 4:50, 4:75, 6:0, 6:25, 6:50 and 6:75. Pertumbuhan tertinggi diperoleh dari media dengan NH_4^+: NO^{3-} (mM) = 6 : 50 dengan min bagi pucuk, 0.86, akar, 2.00, anak pokok, 0.71 dan daun 0.86. Bagi kajian menggunakan fosfat, kepekatan fosfat yang digunakan ialah 4, 6 dan 8 mM. pertumbuhan yng tertinggi diperoleh dari medium dengan 6 mM fosfat dengan min bagi pucuk, 2.00, daun, 2.00, anak pokok, 2.71 dan akar 3.43. Perbezaan kepekatan fosfat yang digunakan tidak menunjukkan kesan yang signifikan ke atas pertumbuhan *C.elliptica* dengan $P<0.05$.