

MANIPULATION OF MEDIUM FOR PROLIFERATION OF  
*CRYPTOCORYNE ELLIPTICA*

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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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## LIST OF ABBREVIATIONS

$\text{NH}_4^+$	-	ammonium
$\text{NO}_3^-$	-	nitrate
ATP	-	adenosine triphosphate
g/L	-	gram per liter
$^\circ\text{C}$	-	degree Celcius
$\text{KNO}_3$	-	potassium nitrate
$(\text{NH}_4)_2\text{SO}_4$	-	ammonium sulphate
mM	-	milimolar
$\text{NaH}_2\text{PO}_4$	-	monosodium phosphate
$\text{KH}_2\text{PO}_4$	-	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,  $\text{NO}_3^-$  and  $\text{NH}_4^+$  were used at of  $\text{NH}_4^+:\text{NO}_3^-$  (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  $\text{NH}_4^+ : \text{NO}_3^- = 6 : 50$  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  $\text{NH}_4^+$  dan  $\text{NO}_3^-$  telah digunakan pada kadaran  $\text{NH}_4^+ : \text{NO}_3^-$  (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  $\text{NH}_4^+ : \text{NO}_3^-$  (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 yang 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  $P < 0.05$ .