RESEARCH ON MICROPROPAGATION OF *Gymnema sylvestre* (RETZ.) R. BR. EX SCHULT

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SUMMARY

A procedure for micropropagation of *Gymnema sylvestre* has been optimized using axilarry buds from field grow plants as explants. The results showed that the optimal conditions for sample sterilization was soaked in ethanol 70% for 1 minutes following $HgCl_2$ 0.1% solution for 7 minutes. The explants were then cultured *in vitro* on Murashige et Skoog (MS) medium supplemented with 6-benzyl amino purine (BAP) 0.2 mg/l and sucrose 30 g/l. In which the regeneration rate achieved 72.15% after 4 weeks. Multi shoots were induced in MS supplemented with BAP 1.5 mg/l, Kinetin 0.5 mg/l, α-Naphtyl axetic acid (NAA) 0.1 mg/l, coconut water 100 ml/l, potatoes 100 g/l, sucrose 30g/l, the coefficient of formed buds and the samples regeneration rate were hightest (96.66% and 3.45 times). There were 96.54% of tested shoots forming roots on MS medium supplemented add NAA 0.3 mg/l, coconut water 100 ml/l, potatoes 100 g/l, sucrose 20 g/l after 6 weeks with the average of 3.56 roots/shoot and 3.9 cm of root length of after 6 weeks. This procedure can be applied for mass production of *Gymnema sylvestre* to meet the commercial demand.

Keywords: *Gymnema sylvestre,* micropropagation, multi - shoot, tissue culture

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