Propagational Technique of *Cymbidium sineness*

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Abstract

This study aimed at in vitro propagating *Cymbidium sinense* Willd. Hybridized seeds removed from seed pods of different maturity were cultured aseptically in four different media, consisting of a base medium of activated charcoal, banana, potato and agar fortified with our different concentrations of MS, NAA, and BA, to determine the effects of different media on the germination and development of rhizome. The results showed that seeds removed from the seed pod at 210-day maturity and cultured in the medium containing 2MS, NAA at 1 ppm, BA at 3 ppm provided the best germination rate at 66%, which was followed by 60% from the seed pod at 190-day maturity. The width and length of a rhizome were measured at 180 and 240 days after the germination. The results showed that the width and length of the rhizome at 180 days were 1.78 0.03 mm and 2.52 0.02 mm, respectively, and at 240 days were 2.49 0.02 mm and 8.68 0.02 mm, respectively. After its development, a rhizome was removed from the culture medium, cut into pieces of 1.5 cm and then cultured separately in a 100- mL flask containing solid and liquid media, each consisted of a base medium of 2MS and NAA at 1 ppm, which was supplemented with four different concentrations of BA at 1, 2, 3, and 4 ppm. The results showed that the liquid medium, consisted of 2MS, NAA at 1 ppm and BA at 3 ppm, provided the best growing conditions for the rhizomes with a total of 64 sprouts counted. The rhizome sprouts were then removed and mass propagated in the same liquid medium that was freshly prepared. The rhizomes were transferred to a solid medium, consisted of ½MS, NAA at 1 ppm and BA at 4 ppm, to induce the growth of rhizomes into orchid plants.

Key words: *Cymbidium sinense* Willd, Medium, Rhizome, Tissue culture

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