Pengaruh pretreatment terhadap pencoklatan eksplan pada kultur in vitro daun Dendrobium lasianthera J.J.Sm

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Abstrak

Dendrobium lasianthera J.J.Sm merupakan anggrek endemik Papua yang terancam punah sehingga perlu dilakukan perbanyakan melalui teknik kultur in vitro. Pencokelatan eksplan harus diatasi sebelum melangkah ke perbanyakan tersebut. Penelitian ini dilakukan untuk mengetahui pengaruh pretreatment terhadap pencokelatan eksplan. Eksplan daun berukuran ± 8 mm x 5 mm diperoleh dari bibit botolan dan sebanyak 15 eksplan ditanam dalam 1 botol kultur berisi medium ½MS (Murashige dan Skoog 1962) modifikasi + 1 mgl-1 NAA + 0,1 mgl-1 BAP.
Beberapa pretreatment yang diujikan ialah eksplan langsung ditanam setelah dipotong (L) (kontrol), eksplan dipotong di dalam air (DA), dan eksplan direndam selama 10 menit di dalam air setelah dipotong (DR). Pencokelatan eksplan cenderung lebih sedikit terjadi pada pretreatment L (1,23 ± 1,56), diikuti pada DA (2,56 ± 1,90), dan DR (4,20 ± 2,04). Namun, eksplan hijau cenderung lebih banyak pada DA (8,60 ± 1,58) dibandingkan pada L (8,00 ± 1,73) dan DR (4,20 ± 2,39). Pemutihan eksplan juga terjadi pada masing-masing pretreatment.
.....Dendrobium lasianthera J.J.Sm is an endangered orchid native from Papua. Therefore, the in vitro propagation is necessary to do the conservation of it. Browning is a problem that must be solved before doing the in vitro propagation. This study was carried out to observe the effect of pretreatment on explants browning. Leaf explants (8 mm x 5 mm) were excised from sterile seedling, and 15 explants cultured on ½ MS (Murashige and Skoog 1962) modified medium + 1 mgl-1 NAA + 0,1 mgl-1 BAP.
Pretreatments that examined are, explants are directly planted after excising (L) (control), explants were excised in the water (DA), and explants were soaked for 10 minutes in the water after excising (DR). Pretreatment L could reduce explants browning (1,23 ± 1,56), than DA (2,56 ± 1,90), and DR (4,20 ± 2,04). However, the highest green explants was showed in DA (8,60 ± 1,58) than in L (8,00 ± 1,73) and DR (4,20 ± 2,39). In addition, explants bleaching occured in each pretreatment.