RESPONS EKSPLAN DAUN *Nepenthes gymnamphora* PADA MEDIUM ½ MS DENGAN PENAMBAHAN 2,4-DIKLOROFENOKSIASETAT DAN AIR KELAPA

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Respons Eksplan Daun *Nepenthes gymnamphora* pada Medium ½ MS dengan Penambahan 2,4-Diklorofenoksiasetat dan Air Kelapa

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Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana Sains pada Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam

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ABSTRAK

Nepenthes gymnamphora adalah salah satu species tumbuhan karnivora yang ditemukan di Pulau Jawa dan Sumatera. Tumbuhan ini mengalami kelangkaan akibat tingginya permintaan serta kerusakan habitat, sehingga upaya konservasi perlu segera dilakukan. Kesulitan dalam perbanyakan *Nepenthes gymnamphora* dapat diatasi dengan teknik kultur jaringan. Namun, penelitian mengenai perbanyakan kultur jaringan khususnya zat pengatur tumbuh yang diperlukan masih terbatas. Zat pengatur tumbuh seperti 2,4-D dan stimulator air kelapa sering digunakan untuk memaksimalkan hasil kultur jaringan. Penelitian ini bertujuan untuk menentukan kombinasi terbaik 2,4-D dan air kelapa dalam merangsang respons eksplan daun *Nepenthes gymnamphora* menuju pembentukan planlet. Media yang digunakan adalah ½ MS dengan variasi 2,4-D (0 ppm; 0,5 ppm; 1 ppm; 1,5 ppm; 2 ppm) dan air kelapa (0%, 10%, 15%, 20%, 25%). Hasil penelitian menunjukkan adanya perubahan morfologi berupa pelengkungan dan perubahan warna dari hijau menjadi kecoklatan. Konsentrasi 2,4-D memberikan pengaruh signifikan terhadap perubahan morfologi dan warna eksplan, sedangkan air kelapa tidak memberikan pengaruh signifikan. Konsentrasi 2,4-D yang paling mempengaruhi pelengkungan adalah 1,5 ppm, sedangkan tingkat *browning* paling dipengaruhi oleh konsentrasi 2 ppm.

Kata Kunci: 2,4-Diklorofenoksiasetat (2,4-D), Air Kelapa, Medium ½ MS, *Nepenthes gymnamphora.*

RESPONSE OF *Nepenthes gymnamphora* LEAF EXPLANT ON ½ MS MEDIUM WITH THE ADDITION OF 2,4-DICHLOROPHENOXYACETIC ACID AND COCONUT WATER

ABSTRACT

Nepenthes gymnamphora is one of the carnivorous plant species found in Java and Sumatra. This plant is experiencing scarcity due to high demand and habitat destruction, so immediate conservation efforts are needed. Difficulties in propagating Nepenthes gymnamphora can be overcome by tissue culture techniques. However, research on tissue culture propagation, especially the required growth regulators, is still limited. Growth regulators such as 2,4-D and coconut water stimulators are often used to maximize tissue culture results. This study aims to determine the best combination of 2,4-D and coconut water in stimulating the response of Nepenthes gymnamphora leaf explants towards plantlet formation. The media used was ½ MS with variations of 2,4-D (0 ppm; 0.5 ppm; 1 ppm; 1.5 ppm; 2 ppm) and coconut water (0%, 10%, 15%, 20%, 25%). The results showed morphological changes in the form of curvature and color changes from green to brownish. The concentration of 2,4-D gave a significant effect on the morphological and color changes of the explants, while coconut water did not give a significant effect. The concentration of 2,4-D that most affected the curvature was 1,5 ppm, while the browning level was most influenced by the concentration of 2 ppm.

Keywords: 2,4-Dichlorophenoxyacetic acid, Coconut Water, ½ MS Medium, Nepenthes gymnamphora.

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