

Respon Pertumbuhan *In Vitro* Epikotil Jeruk Siam Pontianak (*Citrus nobilis* L. var *microcarpa*) dengan Penambahan Ekstrak Tomat (*Solanum lycopersicum* L.) dan Benzyl Amino Purin (BAP)

Abstrak

Jeruk siam Pontianak merupakan komoditas buah-buahan yang banyak dibudidayakan secara konvensional di Provinsi Kalimantan Barat. Perbanyakan tanaman jeruk melalui kultur jaringan dapat menggunakan eksplan epikotil jeruk siam dengan penambahan zat pengatur tumbuh (zpt) berupa ekstrak tomat dan BAP. Penelitian ini bertujuan untuk menganalisis pengaruh pemberian ekstrak tomat dan BAP terhadap respon pertumbuhan *in vitro* epikotil jeruk siam Pontianak. Penelitian ini merupakan penelitian eksperimental menggunakan Rancangan Acak Lengkap (RAL) Faktorial dengan dua faktor. Faktor pertama, konsentrasi ekstrak tomat (T) dengan taraf perlakuan, T₀: kontrol, T₁: 5%, T₂: 10%, T₃: 15%. Faktor kedua, konsentrasi BAP (B) dengan taraf perlakuan, B₀: 0 mg/l, B₁: 0,5 mg/l, B₂: 1 mg/l, B₃: 1,5 mg/l. Hasil penelitian menunjukkan bahwa kombinasi ekstrak tomat dan BAP pada semua perlakuan mampu merangsang elongasi dengan persentase 100%. Perlakuan 15% ekstrak tomat + 0,5 mg/l BAP di hari ke-40 menghasilkan tunas. Perlakuan 5% ekstrak tomat + 0,5 mg/l BAP dan 10% ekstrak tomat + 0,5 mg/l BAP di hari ke-50 membentuk kalus. Berdasarkan hasil penelitian perlakuan ekstrak tomat dan BAP mampu menginduksi elongasi, tunas, dan kalus pada epikotil jeruk siam.

Kata kunci: BAP, Ekstrak tomat, Epikotil jeruk siam, Pertumbuhan *in vitro*

In Vitro Growth Response of Pontianak Siam Orange Epicotyl (*Citrus nobilis* L. var *microcarpa*) with Addition of Tomato Extract (*Solanum lycopersicum* L.) and Benzyl Amino Purin (BAP)

Abstract

Pontianak siam orange is a fruit commodity that is widely cultivated conventionally in the Province of West Kalimantan. Propagation plants through tissue culture can use siam orange epicotyl explants with the addition of growth regulators in the form of tomato extract and BAP. This study aims to analyze the effect of tomato extract and BAP on the in vitro growth response of siam orange epicotyl. This research is experimental research using a completely randomized design factorial with two factors. The first factor, concentration of tomato extract (T) with treatment level, T₀: control, T₁: 5%, T₂: 10%, T₃: 15%. The second factor, BAP concentration (B) with treatment level, B₀: 0 mg/l B₁: 0,5 mg/l, B₂: 1 mg/l, B₃: 1,5 mg/l. The results of the study showed that the combination of tomato extract and BAP is able to stimulate elongation with a percentage of 100%. Stimulates of shoots in the combination of 15% tomato extract + 0.5 mg/l BAP in 40th day and stimulates of callus in the combination of 5% tomato extract + 0.5 mg/l BAP and 10% tomato extract + 0.5 mg/l BAP in 50th day. Based on the results of the study showed that the combination of tomato extract and BAP is able to stimulate elongation, shoots, and callus of siam orange epicotyl.

Keywords: BAP, In vitro growth, Siam orange epicotyl, Tomato extract