

**INDUKSI KALUS DARI EKSPLAN BIJI IMMATURE KEPEL (*Stelechocarpus burahol* (Bl.) Hook.f. & Th.) SECARA IN VITRO**  
*Callus Induction From Immature Seed Explant of KepeL (*Stelechocarpus burahol* (Bl.) Hook f. & Th.) by In Vitro Technique*

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**ABSTRACT**

*Endosperm in immature seeds of S. burahol can be used as explants for callus induction which is triploid. The aim of the study was to induce callus from immature seed explants of S. burahol on Murashige & Skoog media with NAA and picloram concentration treatments. The research was carried out from April to October 2021 at the Tissue Culture Laboratory at KBTPH Salaman and the Faculty of Agriculture, Tidar University. The first study used two-factor RAL, the first factor: the concentration of NAA (N0, N2, N4, N6, N8, N10 mg/L). The second factor: seed diameter (D1 = 0.3 cm, D2 = 0.6 cm, D3 = 0.9 cm). Research II used RAL, the single factor was picloram concentration (P0; P0,5; P1; P2; P4; P8 mg/L). Research I. Explants stretched at 3 days after planting and produced 6 callus from 1 week after planting (weeks after planting). Three callus were formed in treatment N4D1 and one callus each in treatment N0D3, N4D3 and N6D12. Callus textured crumbs and compact. Callus color is white, transparent white, and greenish yellow. One liver and cotyledon somatic embryos were found in the N2D1 treatment. In the second study produced 17 callus. At 0.5 Picloram; 1; 2 mg/L produced compact and crumb callus, callus color was white and transparent. At 4 and 8 mg/L picloram produced a white compact callus. The success of callus induction is still small, so it is necessary to continue the use of types and concentrations of auxins and cytokinins and younger explants of immature seeds. The higher number of callus can be analyzed for ploidy level so that triploid plant material can be produced.*

**Keywords:** somatic embryo, crumb callus, compact callus, cotyledons, triploid

**ABSTRAK**

Endosperma dalam biji *immature S. burahol* dapat sebagai eksplan untuk induksi kalus yang bersifat triploid. Tujuan penelitian untuk induksi kalus dari eksplan biji *immature S. burahol* pada media *Murashige & Skoog* dengan perlakuan konsentrasi NAA dan picloram. Penelitian dilaksanakan bulan April sampai Oktober 2021 di Laboratorium Kultur Jaringan di KBTPH Salaman dan Fakultas Pertanian Universitas Tidar. Penelitian I digunakan RAL dua factor, faktor pertama: konsentrasi NAA (N<sub>0</sub>, N<sub>2</sub>, N<sub>4</sub>, N<sub>6</sub>, N<sub>8</sub>, N<sub>10</sub> mg/L). Faktor kedua: diameter biji (D<sub>1</sub>= 0,3 cm, D<sub>2</sub>= 0,6 cm, D<sub>3</sub>= 0,9 cm). Penelitian II digunakan RAL, faktor tunggal berupa konsentrasi picloram (P<sub>0</sub>; P<sub>0,5</sub>; P<sub>1</sub>; P<sub>2</sub>; P<sub>4</sub>; P<sub>8</sub> mg/L). Penelitian I. Eksplan membentang pada 3 hst dan dihasilkan 6 kalus mulai 1 mst (minggu setelah tanam). Tiga kalus terbentuk pada perlakuan N<sub>4</sub>D<sub>1</sub> dan masing-masing satu kalus pada perlakuan N<sub>0</sub>D<sub>3</sub>, N<sub>4</sub>D<sub>3</sub> dan N<sub>6</sub>D<sub>12</sub>. Kalus bertekstur remah dan kompak. Warna kalus putih, putih transparan, dan kuning kehijauan. Satu embrio somatik fase hati dan kotiledon terdapat pada perlakuan N<sub>2</sub>D<sub>1</sub>. Pada penelitian II dihasilkan 17 kalus. Pada Picloram 0,5; 1; 2 mg/L menghasilkan kalus kompak dan remah, warna kalus putih dan transparan. Pada picloram 4 dan 8 mg/L menghasilkan kalus kompak berwarna putih. Keberhasilan induksi kalus masih sedikit, sehingga perlu dilanjutkan penggunaan macam dan konsentrasi auksin maupun sitokinin serta eksplan biji *immature* lebih muda. Jumlah kalus yang lebih banyak dapat dianalisis tingkat ploidi sehingga dapat dihasilkan materi tanaman triploid.

**Kata kunci:** embrio somatik, kalus remah, kalus kompak, kotiledon, triploid