INDUCTION CALLUS CULTURE OF ELAEOCARPUSGRANDIFLORUS IN WOODY PLANT MEDIUM

[1]NOOR AINI HABIBAH, [2]NUGRAHANINGSIH WH, [3]Y. ULUNG ANGGRAITO, [4]FAJAR MUSTAFA, [5]KHOIRUL MUKHTAR, [6]NUR WIJAYANTI

[1]Plant Tissue Culture Laboratory, Faculty of Science and Mathematic, Universitas Negeri Semarang, Indonesia
[2]Biochemistry Laboratory, Faculty of Science and Mathematic, Universitas Negeri Semarang, Indonesia
Email: nooraini.habibah@yahoo.com

Abstract: *Elaeocarpusgrandiflorus* contains bioactive compounds that have potency as an antidiabetic agent. Bioactive compounds of *E.grandiflorus*can be produced by callus culture one of plant tissue culture methods. Production of bioactive compounds from *E.grandiflorus*plants directly has constraints, as though the availability of rare plants and low germination rates,consequently the availability of seeds is limited. Furthermore, the production of secondary metabolites from plants involves extensive land, climate limitations, and bioactive compounds cannot be produced continuously in controlled conditions. In this study, we investigate the induction of callus culture of *E.grandiflorus*. Callus culture induction was carried out by maintaining *E.grandiflorus* leaf stalk explants on solid Woody Plant Medium (WPM) with the addition of growth regulators namely 2,4-dichlorophenoxyacetic acid (2,4-D) and picloram indifferentconcentrations. The results revealed that callus grow on all treatment mediums with variousgrowth. The percentage of callus formation in medium treatment varies from 38 to 50%. Callus induction time ranged from 4.8 to 7 days after the explant was planted. Overall, it can be concluded that the WPM medium with additional growth regulators, 2,4-dichlorophenoxyacetic acid (2,4-D) or picloram can be used for callus induction of *Elaeocarpusgrandiflorus*.

Keywords: Elaeocarpusgrandiflorus, callus culture, 2, 4-D, Picloram