

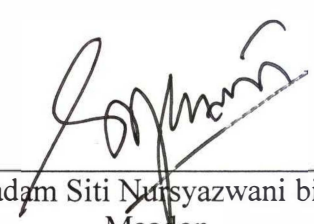
CALLUS INDUCTION FROM IN VITRO LEAVES OF MAHKOTA
DEWA (*Phaleria macrocarpa*)

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ABSTRACT

CALLUS INDUCTION FROM *in vitro* LEAVES OF MAHKOTA DEWA (*Phaleria macrocarpa*)

Phaleria macrocarpa is a herbal plant which belongs to the Thymelaeaceae family. It has numerous medical properties that can treat diabetes, high blood pressure and even cancer. The main objective of this study was to initiate callus induction from *in vitro* leaves of *Phaleria macrocarpa* and to observe the effects of different treatment in callus induction of the *in vitro* leaves of *Phaleria macrocarpa*. The matured seeds were cultured in Murashige and Skoog (MS) media and transferred into new fresh media after four weeks. When the *in vitro* plant was matured, the leaf of the plant was cultured onto media containing plant growth regulator (PGR). The first treatment that was MS basal media without plant growth regulator (MSO) acts as a negative control because it does not induce any callus growth. After three weeks, callus started to initiate. The treatment that was conducted to induce callus was (MS+0.5 mg/L 2,4-D), (MS+0.5 mg/L 2,4-D+0.2 mg/L BAP), (MS+1.0 mg/L 2,4-D), (MS+1.0 mg/L 2,4-D+0.2 mg/L BAP), (MS+1.5 mg/L 2,4-D), (MS+1.5 mg/L 2,4-D+0.2 mg/L BAP). MS media supplemented with 0.5 mg/L 2,4-D and 0.2 mg/L BAP showed the optimum treatment after 4 weeks of observation. Therefore, the optimization of callus growth by using different media and formulation of concentration PGR can be done.