
AN EFFICIENT REGENERATION SYSTEM THROUGH THIN CELL LAYER CULTURE OF *Stephania dielsiana* Y.C. WU

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SUMMARY

Stephania dielsiana Y.C. Wu is a Medicinal plant which can bring highly economic and medicinal value. Thin cell layer (TCL) culture is a potential method for *in vitro* propagation of *S. dielsiana*. However, this method is still limited in Vietnam. After sterilization with HgCl₂ 0.1% solution for 7 minutes and being cultured on Murashige T. and Skoog F. (1962) medium supplemented with 6-benzyl amino purine (BAP) 0.3 mg/l, sucrose 30 g/l, agar 6.5 g/l, the cultured samples were recorded with clean materials percentage of 85.96%, shoots were generated of 70.84% after 4 weeks. Callus induction and shoot regeneration on MS medium supplemented with BAP 1.2 mg/l, Kinetin 0.2 mg/l, α -naphthaleneacetic acid (NAA) 0.3 mg/l were obtained with 80.83% and 78.30%, respectively. Shoots were generated after 19.13 days on average. Multi shoots were generated by culturing on MS medium supplemented with BAP 0.7 mg/l; Kinetin 0.2 mg/l; NAA 0.3 mg/l, the result was indicated by multi shoot rate reaching 3.3 and the average length of the shoot being 3.83 cm. Shoots were green and healthy. Highest rooting rate (96.68%) was obtained on MS medium supplemented with NAA 0.2 mg/l, IBA 0.3 mg/l, and root length reaching 2.74 cm after 4 weeks of culture.

Keywords: Callus, *in vitro*, medicinal plants, micropropagation, *Stephania dielsiana*, thin cell layer.

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