

P-46 (111)**ESTABLISHMENT OF A MICRO-PROPAGATION METHOD FOR DIRECTLY IN VITRO ROOTING OF CALLISTEMON VIMINALIS MICRO-CUTTINGS**

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A micro-propagation method is described for bottlebrush (*Callistemon viminalis*) using nodal explants from young plant of bottlebrush under tissue culture conditions. This method help to provide a rapid, reliable and reproducible method for in vitro mass propagation of bottlebrush. Multiple shoots were induced from axillary buds on MS (Murashige and Skoog) and ARM (Anderson's Rhododendron Medium) media containing different concentrations of 6-Benzylaminopurine in combination with Naphthalene acetic acid and Indole-3-butyric acid. Both MS and ARM media were suitable for these goals and ARM medium with 6-Benzylaminopurine (2 mg/l) and Naphthalene acetic acid (0.2 mg/l) was the most effective medium for shoot multiplication while the ARM medium is better than MS medium about proliferation. In vitro regenerated shoots on half-strength MS media supplemented with Indole-3-butyric acid (1.5 mg/l) developed better roots (100%), while don't have significantly difference with half-strength MS alone and MS medium containing Naphthalene acetic acid (0.2 mg/l). The rooted plantlets were successfully acclimatized and we observed the most of viability of rooted new-shoots (100%) in MS media supplemented with Indole-3-butyric acid (1.5 mg/l) and 1/2MS medium with Naphthalene acetic acid (0.2 mg/l). we reached to the noticeable number of bottlebrush plantlets.

Keywords: Bottlebrush, *Callistemon viminalis*, In-vitro, Multiplication, Single Node, Tissue Culture