

**DIRECT MULTIPLE SHOOT BUDS REGENERATION FROM SHOOT  
APEX AND NODAL EXPLANTS FOR MASS PROPAGATION OF  
*SANTALUM ALBUM* LINN.**

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**ABSTRACT**

*In vitro* propagation studies were initiated with *Santalum album* Linn. for rapid micropropagation using shoot apex and nodal explants. Direct regeneration of multiple shoot bud was observed from both explants in Murashige and Skoog (MS) basal medium supplemented with various concentrations and combinations of BAP (6-Benzylaminopurine), Kn (kinetin), IAA (Indole-3-acetic acid) and NAA( $\alpha$ -Naphthalene acetic acid). The highest shoot regeneration frequency (100%) and mean number ( $4.76 \pm 0.33$ ) of shoots per explant was achieved from nodal segments cultured on MS medium fortified with 2.0 mg/l BAP + 0.5 mg/l IAA within 15 days of inoculation. 2.0 mg/l BAP + 1.0 mg/l IAA found to be best for shoot elongation. In terms of rooting, *In vitro* derived well developed shoots were excised and implanted individually on half strength of MS with different concentrations of IAA, IBA and NAA. Maximum number ( $3.11 \pm 0.12$ ) and highest length (3.73 cm) of root was observed on half strength MS medium containing 0.5 mg/l IAA + 1.0 mg/l IBA. Well rooted plantlets transferred to plastic pots containing soil and compost mixture (1:1) and showed 91% survival when transferred to outdoor.

**KEYWORDS:** Explants, *In vitro*, Micropropagation, Multiplication, *Santalum album*.