

## ***In vitro* regenerative efficacy of different explants of sandalwood (*Santalum album* L.)**

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Sandalwood (*Santalum album* L.) is a commercially and culturally important plant species, known for its fragrant heartwood and oil. Due to the high value of heartwood and oil, this species is illegally harvested in large numbers leading to possible extinction. The present study was aimed to determine the *in vitro* regenerative efficacy of different explants of sandalwood. Six types of explants namely, shoot tips, stem segments, immature entire leaves, mature leaf segments, petiole segments, and single nodal segments were excised from the healthy stem cuttings of sandalwood seedlings (two years old). The sterilized explants were separately cultured on MS medium containing 0.5 mg/l BAP. The results revealed that *in vitro* response percentage of the cultured explants showed significant difference ( $p < 0.01$ ) among the tested explants ranging from 13.3% to 56.6%. The immature leaf explants showed the highest *in vitro* response (43.3%) and survival rate (65%) at four weeks of culture. Shoot tips exhibited higher (80%) survival but low *in vitro* response (33.3%). Mature leaf explants were subjected to browning. Petiole and mature leaf explants failed to show *in vitro* response and had lower survival rates among the tested explants of sandalwood. Therefore, immature entire leaves would be the more effective among the tested explants with the given medium constituents.

**Keywords:** Explants, *Santalum album*, Shoot tip, Petiole, Single nodal segment, *in vitro* response

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