

**IN-VITRO CALLUS FORMATION OF RED SANDALWOOD
(*Pterocarpus santalinus* L.) AS AFFECTED BY EXPLANT TYPE AND
DIFFERENT LEVELS OF 2,4-D AND BAP**

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Pterocarpus santalinus is a valuable medicinal plant, now included in red list of endangered plants under IUCN guidelines. Distribution of this plant in Sri Lanka is very limited and the local demand for ayurvedic purposes is still unreached. As conventional propagation techniques are not satisfactory, possibilities in *in-vitro* techniques seem to be promising, and callus culture is one aspect that has to be studied. Leaf parts, cotyledon parts, root segments, inter-nodal segments, and nodal segments from *in-vitro* seedlings were used as explants. 2,4-D and BAP were used separately in six different concentrations (1 mg/l - 6 mg/l) for callus initiation. Full strength MS medium (Murashige and Skoog, 1962) was used with 30 g/l of sucrose and 8 g/l agar as the culture medium. Callus formation could be observed in every explant. However, large clumps of creamy white callus were obtained from nodal segments. Callus formation in root segments was very poor and showed brown color. In nodal segments, callus formation was started within two weeks and large clumps of callus were observed while slight swelling occurring on root segments, leaf parts and in cotyledon parts at the end of 4th week. Callus formation was best when the culture medium was supplemented with 3 mg/l of BAP. Though callus formation could be observed in 2,4-D, amount of callus formed was poor. Present studies revealed that MS medium supplemented with 3 mg/l BAP is ideal for callus induction in *Pterocarpus santalinus* and possibility of using nodal segments as initial explants.