Tissue Culture of *Hevea brasiliensis*

(Seedling Shoot Tip Culture)

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ABSTRACT

Shoot tips of *Hevea brasiliensis* Muell.-Arg removed from aseptically grown seedlings could be established on liquid or solid media supplemented with or without growth regulators. Four different basal media were tested. The Murashige and Skoog medium (1962), which is a high salt strength medium was found to be the most suitable for axillary shoot proliferation. The other media tested were, the Woody Plant Medium (WPM), the White's medium (1943) which is a low salt strength medium and a modified medium containing MS (1962) salts and vitamins used in Skirvin and Chu (1980) medium. Different cytokinins were tested for shoot proliferation. Benzylaminopurine (BAP), gave better results than zeatin, kinetin or N^6 (Δ^2 - isopentenyl) adenine (2iP). It was found that axillary bud proliferation could be easily induced. The elongation of these buds into shoots however, was a very slow process. The newly formed shoots with 2-4 axillary

buds had to be separated and subcultured. They had to be incubated for a long period for them to get stabilized in the medium. After this period, buds in the separated segments showed rapid elongation into shoots which could then be subcultured again, inducing further proliferation of buds. A multiplication rate of 30 $\pm$ 2.0 shoots per explant was obtained after 165 days of incubation. A concentration of 0.5 mg/l of the Gibberellic acid GA_3 had no effect on shoot elongation, whereas at a concentration of 2.0 mg/l dwarf shoots were produced.

Rooting of the proliferated shoots was not attempted. Shoot tips removed from aseptically grown seedlings could be rooted on solid & liquid media.The rooting medium was supple--mented with indolebutyric acid (IBA) and activated charcoal (AC) or IBA, BAP and AC.

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