B-147 Identification of aromatic compounds from callus cultures of cinnamon *(Cinnamomum zeylanicum* L, 2n=24)

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Cinnamomum zeylanicum (Family Lauraceae), indigenous to Sri Lanka, occupies a unique position as a spice due to its volatile aromatic oils, of which eugenol and cinnamic aldehyde are the major components. The predominant site of biosynthesis of these compounds is the leaf. In this study, attempts were made to identify aromatic compounds from leaf callus cultures with a view to the development of an *in vitro* system to extract those chemicals. Procedure for the callus initiation, proliferation, sampling and identification is reported.

Leaf disks were cultured on MS and woody plant (WP) basal media supplemented with different concentrations of auxins (2,4-D, NAA and IAA) and cytoxins (BAP and kinetin). Successful callus initiation and proliferation could be observed in WP medium containing NAA (5 mg/l) and BAP (0.5 mg/l). Callus growth displayed a typical sigmoid type growth pattern and the calli predominantly consisted of elongated cells. The highest callus initiation was observed with yellowish green leaves compared to the green, light green and reddish coloured leaves. Light enhanced the initiation and proliferation of callus and also the phenolic oxidation. Calli were homogenized with $CHCl_3$ and diethyl ether respectively for analysis employing gas liquid chromatography (GLC). GLC profiles clearly indicated the presence of eugenol and cinnamic aldehyde in the samples. The results revealed that, the aromatic compounds can be identified from callus cells and thus, there is a potential to develop an *in vitro* system to extract major components of cinnamon oil from leaf callus cultures.