B-84 Isozyme fingerprinting of leaf extracts of *Pericopsis mooniana* (Nadun)

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Isozymes separated on 1 dimensional polyacrylamide gel electrophoresis (1 D PAGE) have been used for identification of many plants, but mainly on species and cultivar level. We hypothesized that if the method was sensitive enough to identify elite parent trees and their progeny, screening of seedlings of slow growing trees would be greatly facilitated. The selection of only best performing young trees would increase the timber production significantly.

A random sample from ± 45 years old *Pericopsis mooniana* (Nadun) tree was collected at the Badagamuwa forest plantation, Kurunegala. Trees were classified in categories based on girth (GBH) and branching habits. The 2 extremes were withheld (best performing and poorest performing) for this study. Fresh extracts from the youngest leaves of the trees were collected and the isozymes banding pattern was obtained on 1 D PAGE. The gels were stained with 9 different enzymes. The positive zymograms were scanned and this information was digitized and analysed using specific software "Imagemaster". The cluster analysis was performed with "Gelcompar" software.

From 9 enzymes tested, only peroxidase (PER), esterase (EST) and alcohol dehydrogenase (ADH) enzymes produced distinct bands. Staining for peroxidase gave the best results and it produced 2 distinct bands. Asparate amino transferase (AAT) did not produce any bands. Isocitrate dehydrogenase and malate dehydrogenase produced a smear in some lanes but no bands. The enzymes leucine aminopeptidase, shikimate dehydrogenase, phosphoglyceroisomerase, develop a colour change but most of the load was passed and/or accumulated at the end of the gel. Changes of running conditions might still produce bands, but that is not very likely.

There was no specific enzymes producing sufficient bands to allow clustering and even combining the result of the positive enzymes did not allow clustering.