

Use of isoenzymes to differentiate growth categories of *Pericopsis mooniana* trees

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Abstract

Leaf isoenzymes of *Pericopsis mooniana* from twenty-one trees at forest plantation were evaluated for their use in identification of elite trees among heterogeneous population. Trees were grouped morphologically, before leaf extracts were separated by one-dimensional polyacrylamide gel electrophoresis. Isoenzyme analysis were carried out for peroxidase, esterase, alcohol dehydrogenase, formate dehydrogenase, acid phosphatase, aspartate aminotransferase, isocitrate dehydrogenase, malate dehydrogenase, leucine aminopeptidase, phosphoglucoisomerase, phosphogluconate dehydrogenase, phosphoglucomutase, and shikimate dehydrogenase. From the thirteen enzymes studied only four gave distinct banding patterns. Level of significance of appearing particular band for each enzyme of a given category was investigated using χ^2 -test, followed by cluster analysis for categorization. The isozyme type A of formate dehydrogenase showed promising results that could be used for differentiating trees of categories investigated.

Additional key words: formate dehydrogenase, 1-D PAGE.