

STUDY OF POLYMORPHISM AMONG MOTHER STOCKS AND GENETIC FIDELITY OF REGENERATED PLANTS IN *CHLOROPHYTUM* SPP. USING RANDOM AMPLIFIED POLYMORPHIC DNA MARKERS

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ABSTRACT: Genetic variability was assessed in *Chlorophytum* spp. collected from different growing regions using RAPD (Random Amplified Polymorphic DNA) markers. Genetic stability among *in vitro* propagated plants was also analyzed using the same RAPD technique. The similarity value of RAPD profile ranged from 0.74 to 1 among known *Chlorophytum* spp. and unknown accessions while similarity value ranged from 0.76 to 0.81 among the micropropagated somaclonal variants. The number of total amplified fragments and polymorphic amplicons detected per primer ranged from 2 (OPA-01) to 9 (OPA-20) and from 1 (OPA-07) to 4 (OPA-4) respectively, with an average of 5 and 2.8 bands per primer and in case of RAPD analysis for somaclonal variants, polymorphic amplicons detected per primer ranged from 1 (OPA-07) to 6 (OPA-18) with an average of 2 polymorphic bands per primer (or 3 if only those primers which gave polymorphism are considered). The cluster analysis using UPGMA could distinguish *Chlorophytum* species, different accessions as well as the somaclonal variants.

Key words: *Chlorophytum*, Micropropagation, RAPD, Tissue culture, Somaclonal variation.