



***In vitro* culture protocol, micropropagation, acclimatization and chemical constituents of *Spathiphyllum cannifolium* plant under copper concentration effect**

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Abstract : The present work was carried out at tissue culture laboratory of Ornamental Plants and Woody trees Department to establish propagation protocol affecting by BA and NAA at different concentrations and study the effect of different copper concentrations in the culture medium on the *in vitro* and *in vivo* shooting behavior as well as chemical constituents of *Spathiphyllum connifolium* plants. For culture establishment, the results showed that supplementation of MS culture medium by 0.5 mg /l of BA gave the maximum shootlet numbers / explant. BA at 0.5mg/l + NAA 0.1 mg/l gave the longest shootlets length. Copper was added to the medium on concentrations of (0.0, 2.5, 5.0, 10.0 and 20.0 ppm). The highest number of shootlets, longest shootlets and the heaviest shootlets and fresh and dry weights of roots were obtained by the copper treatments at the low concentrations. After adaptation, copper at 2.5 ppm gave the highest value of shoot number, shoot length, leaves number, root number, root length, shoot and root fresh weight and plant dry weight. Chlorophyll (a), (b) and carotenoids as well as copper content decreased by increasing copper concentration. All copper concentrations increased carbohydrates% but decreased nitrogen and zinc content, copper at 5.0 ppm increased P and K content.

Key words: *Spathiphyllum cannifolium*, plants, *in vitro*, *in vivo*, BA, NAA, copper.

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