

OPTIMIZATION OF FACTOR AFFECTING *IN VITRO* SHOOT MULTIPLICATION OF *TERMINALIA ARJUNA*

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Abstract: Realizing the immense potential of *Terminalia arjuna* as a source of valuable medicine and considering its ever-increasing demand the present study was taken up to highlight the most crucial step of any micropropagation protocol i. e. *in vitro* shoot multiplication as it determines the availability of shoot stock for rooting or complete plantlet formation. With increase in shoot multiplication fold, success of micropropagation also increases. Thus, to maximize *in vitro* shoot multiplication many factors, in addition to plant growth hormone, are also important. Present study concluded that propagule size for subculture, type of growth medium, medium strength, carbohydrate source and subculture duration also affect shoot multiplication. Propagule with three shoots were cultured on modified MS medium (MMS) fortified with 4.44 μ M BAP + 0.54 μ M NAA + additives and 3% sucrose gave 3.7 fold shoot multiplication after 4 weeks.

Keywords: *Terminalia arjuna*, *In vitro* shoot multiplication, Modified MS medium, Propagule, Carbohydrate

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