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Micropropagation of African Violet (Saintpaulia Ionantha Wendl.) in Grapevine Bleeding Culture Media

Mihriban Batuk¹, Solmaz Najafi²

¹ Van Yuzuncu Yil University, Horticulture,
² Urmia University (Iran) and Van Yuzuncu Yil University (Turkey), Dept. of Field Crops, Iran

Abstract

African violet (Saintpaulia ionantha Wendl.) is one of the plants which its micropropagation by tissue culture method has been done in commercial scale, but unfortunately in our country its micropropagation is being carried out using classical methods such as leaf cuttings. For production of one thousands African violet (Saintpaulia ionantha Wendl.) cuttings by classical method, 667 full-grown plants are needed, while by using tissue culture technique, only 3 full-grown plants will be necessary. This study was designed using GB (Grapevine Bleeding) for economical purposes of tissue culture technique in micropropagation of African violet. In this study the GB used as growing medium in vitro. Three different growing media including 100% MS, 100% GB and 50% MS+50% GB as well as three kinds of explants (leaf, stem, node) used for regeneration. Several parameters such as shoot numbers per explant, shoot length (cm) and shoot regeneration percentage were measured in each regenerated plant. Results showed that the best economic growing medium was 50% MS+50% GB with leaf as explant. The selected explant was cultured in selected suitable medium with different amounts of growth regulators including BAP and NAA. The highest numbers of shoot, shoot length and shoot regeneration percentage were observed in 0.5 mg/L BAP+0.7 mg/L NAA. In other study the different amounts of other growth regulators including BAP and IBA used for root generation and results showed that the highest number of roots, root length and rooting percentage were obtained in 0.5 mg/L BAP+0.5 mg/L IBA.

Keywords: African violet, Grapevine bleeding, Growth regulator, Micropropagation

 $[\]textbf{Contact Address: } Mihriban Batuk, Van Yuzuncu Yil University, Horticulture, , e-mail: mihriban batuk 10@gmail.com Markov Ma$