Journal of Innovations in Applied Pharmaceutical Science (JIAPS)
e-ISSN: 2455-5177
www.jiapsonline.com

Research article

In vitro cloning of dang sam (*Codonopsis pilosula* (Franch) Nannf)

Đoan Trong Đức[1], Bui Thanh Hoa[2], Tran Van Minh[2*]

[1]*Kon Tum Center for Scientific Application and Technology Transfer.*
[2]*International University, Vietnam National University HCM.*

Key words: Acclimatization, callus, multiple shoots, regeneration, sterilization.

***Corresponding Author: Tran Van Minh,** International University, Vietnam National University Ho Chi Minh City.

Abstract

Sterilization of Dang sam (*Campanumoea pilosula* (Franch) Nannf) cutting explants by $HgCl_2$ 0.1% in 5 minutes reach 58.3% survivals. The MS medium supplemented with 2.4D 2 mg/L and TDZ 0.1 mg/L was favored for callus induction on cutting surface after 30 days. Callus was proliferated on MS-1/2 medium supplemented with 2.4D 2 mg/L and TDZ 0.1 mg/L after 8 weeks. Callus cluster of 5 mm diameter were regenerated on MS medium supplemented with BA 2 mg/L and NAA 0.5 mg/L initiated multiple shoots after 60 days. Multiple shoots were divided into shoot clusters having diameter of 5 mm with 3-5 shoots/cluster. Shoot clusters were cultured on multiplication medium of MS supplemented with BA 2 mg/L and NAA 0.5 mg/L initiated to new shoots and the shoots were bigger after 20 days. Shoots were divided into 1 cm length cuttings with 2 leaves and cultured on MS medium supplemented with BA 0.5 mg/L and IBA 0.7 mg/L for regeneration to whole plantlets having 4-5 leaves, 6-10 roots, 4-6 cm root length reaching survivals of 85.07% and being ready for acclimatization environment. Sand substrate was favored for acclimatization in the first 10 days of ex vitro culture and mix-soil substrate was favored for plantlet growth and development afterward.

.