ABSTRACT

In vitro propagation of *Crassula ovata* (Mill.) Druce, an ornamental and medicinal plant native to South Africa, was studied to investigate the response of explant types, concentrations and combinations of plant growth regulators on *in vitro* regeneration. The present work described the optimal methodology; three types of explants were used, leaf, shoot tip and stem. The explants were disinfected with 70% ethanol followed by 10% sodium hypochlorite solution along with 2 drops of tween^{20}; leaf (for 2 and 9 min), shoot tip (for 2 and 11 min), stem (for 2.5 and 12 min) respectively. The applied disinfection procedure was successful, and then explants were cultured on MS medium supplemented with different concentrations and combinations of PGRs. The influence of different PGRs was recorded in term of number of leaves, roots and root length. Among PGRs, the highest root and shoot induction was observed on 1.5 mg/l IAA, 0.5 and 1.5 mg/l 2,4-D, 2.0 mg/l KIN, and 0.5 mg/l NAA in shoot tip and stem explant, where leaf explant showed only rooting. The plantlet regeneration was the most efficient with combination of 0.5 mg/l BAP with 1.5 mg/l IAA and 1.0 BAP with 2.0 mg/l 2,4-D in shoot tips. The plantlets were successfully acclimatized to continue to grow under natural conditions.