IN VITRO PROPAGATION OF *Garcinia quaesita*

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Garcinia quaesita Pierre (*Kanagoraka*) has a growing demand presently in the world due to its remarkable medicinal value, Hence, it has tremendous potential for introduction to homegardens as a cash crop. This experiment was designed to establish a protocol for *in vitro* propagation of *G. quaesita* to fulfil the high demand of good quality planting materials and to find suitable sterilization and regeneration media. In experiment one, three treatments were tested to identify the best sterilization procedure using 1-3 cm long shoot tips cultured on Woody Plant Medium (WPM). As treatments, Z_1 - 0.1% Captan (1 hour) + 30% Clorox (20 minutes), Z_2 - 0.1% Captan (1 hour) + 30% Clorox (20 minutes) + 50% ethanol (5 minutes) and Z_3 - 0.1% Captan (1 hour) + 40% Clorox (20 minutes) + 50% ethanol (5 minutes) were used. Among those, Z_3 showed the best performance (26.7% sterile culture, 2.2% bacterial contamination, 2.2% dead culture and 68.8% fungal contamination) compared to other treatments after four weeks. Therefore, Z_3 was used for further experiments. In experiment two, apical buds were cultured on WPM supplemented with three concentrations of BAP at 3.0, 5.0, 10.0 mgL^{-1} and 3.0 mgL^{-1} BAP with 0.5 mgL^{-1} NAA. The highest shoot length (0.68 cm), the highest numbers of leaves (1.55 ± 1.01) and the highest sterile culture percentage (44.6%) were observed in the medium containing 3.0 mgL^{-1} BAP with 0.5 mgL^{-1} NAA after four weeks ($p>0.05$). There was no significant difference in the shoot height among the treatments. In experiment 3, leaf explant of *G. quaesita* was cultured on WPM containing four levels of BAP (1, 2, 4, & 8 mgL^{-1}) with 0.5 mgL^{-1} NAA. Callus development from the leaf explants could not be observed during the time period and some were contaminated after seven weeks. WPM containing 3.0 mgL^{-1} BAP with 0.5 mgL^{-1} NAA was the best treatment for *in vitro* propagation of Garcinia.

Keywords: BAP, *Garcinia quaesita*, *Goraka*, *In vitro* propagation, NAA