DETERMINATION OF CHEMICAL PROPERTIES OF *Garcinia quaesita* Pierre AT DIFFERENT LOCATIONS IN SRI LANKA

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ABSTRACT

Garcinia quaesita Pierre is an endemic, underutilized tree species belongs to the family Clusiaceae in which the fruit rind bears a high economic value. Previous researches report that Garcinia consists of various phytochemicals including Hydroxycitric acid as the primary organic acid. Garcinia is commonly propagated by seeds. To capture the existing traits and fix them and to obtain uniform planting materials vegetative propagation is more suitable than seed propagation. Grafting is a successful vegetative propagation method on Garcinia where mother plants with desired quality traits are needed. The objective of this study is to determine the chemical properties (Hydroxycitric acid content, flavonoid content, phenol content and tannin content) of *Garcinia quaesita* Pierre at locations Horana I, Horana II, Horana III, Batagoda, Etipola I, Etipola II and Bandarapola to select mother plants with desired quality traits for grafting of garcinia. Aluminium chloride colorimetric assay, Folin-Ciocalteu assay and method described by Krishnamoorthy *et al.*, (1982) were performed to obtain the results. Standard analytical procedures were followed to comparatively study the phytochemical composition at different locations. Quantitative phytochemical analysis revealed the highest Hydroxycitric acid percentage (4.09 ± 0.01%) and the highest tannin content (10.57 ± 0.04 mg of QE) at Horana I among the seven locations. Total flavonoid content at Bandarapola (6.79 ± 0.13 mg of QE) was higher than the other locations while Batagoda reported to have the highest phenol content (14.31 ± 0.02 mg of QE). Further studies are suggested on determining chemical properties of *Garcinia quaesita* Pierre at different other locations.

Key words: *Garcinia quaesita*, Hydroxycitric acid, Flavonoid, Phenols, Tannins