

Quantitative phytochemical analysis of eight plant materials of *Amurthashtaka kwatha*

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'*Amurthashtaka kwatha*' is an Ayurvedic polyherbal formulation widely used to treat fever associated with inflammation. It consists of eight ingredients, namely, the bark of *Azadirachta indica* (Neem), seeds of *Holarrhena antidysenterica* (Coneru), the heartwood of *Santalum album* (Sandalwood), stem of *Tinospora cordifolia* (Guduchi), whole plant of *Trichosanthes cucumerina* (Wild gourd) and rhizome of *Cyperus rotundus* (Nut grass), *Picrorhiza scrophulariiflora* (Kutki) and *Zingiber officinale* (Ginger). The study is aimed at the quantitative determination of phytochemicals of eight plant materials of '*Amurthashtaka kwatha*'. The plant materials were purchased from three Ayurvedic medicine shops in Sri Lanka and authenticated. Hot aqueous extracts were prepared according to Ayurvedic pharmacy. One part of the raw drugs was boiled with eight parts of water, and the final solution was reduced up to one-eighth. Total phenolic contents were determined by the Folin-Ciocalteu method against the gallic acid standard, and total flavonoid content was determined by aluminum chloride method against the quercetin standard. Alkaloids and saponins were determined using crushed powders. The highest total phenolic content was obtained in *Santalum album* (25.83 ± 0.43 mg gallic acid equivalents; GAE)/ g) while the lowest value 3.44 ± 0.29 GAE)/ g was given by *Picrorhiza scrophulariiflora*. The highest total flavonoid content was identified in *Trichosanthes cucumerina* as 6.46 ± 0.18 (mg quercetin equivalents (QE)/ g) and the lowest value was found in *Zingiber officinale* as 1.06 ± 0.28 (mg QE/ g). The highest percentages of alkaloid and saponin contents were calculated as $11.84 \pm 0.91\%$ in *Holarrhena antidysenterica* and $8.80 \pm 0.20\%$ in *Picrorhiza scrophulariiflora* respectively. The lowest percentage of alkaloid and saponin contents were obtained as $1.48 \pm 0.22\%$ and $1.21 \pm 0.26\%$ in *Santalum album*. The results show that '*Amurthashtaka kwatha*' is a source of all the tested phytoconstituents which may be beneficial for its pharmacological activities.

Keywords: *Amurthashtaka kwatha*, total phenolic content, total flavonoid content, alkaloids, saponins

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