

Physico-chemical properties and phytochemistry of the eight plant materials of *Amurthashtaka kwatha*

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Amurthashtaka kwatha, is an Ayurvedic polyherbal formulation used in the treatment of fever associated with inflammation. It is made up of eight plants including the bark of *Azadirachta indica*, seeds of *Holarrhena antidysenterica*, heart wood of *Santalum album*, stem of *Tinospora cordifolia*, whole plant of *Trichosanthes cucumerina* and rhizomes of *Zingiber officinale*, *Picrorhiza scrophulariiflora* and *Cyperus rotundus*. This study is aimed in evaluation of physicochemical properties and phytochemistry of individual plant constituents of *Amurthashtaka kwatha* to establish the standardization parameters of the kwatha. Plant samples were obtained from three markets in western province, Sri Lanka and evaluated as per standard protocols. Aqueous extracts of individual plants were qualitatively evaluated for the presence of chemical constituents. Phenolics, flavonoids, tannins and terpenoids were detected in all eight plants. Cardiac glycosides were only detected in *H. antidysenterica* while carbohydrates and saponins were absent only in *S. album*. Alkaloids were absent in *A. indica* and *S. album*. Steroids were absent in *C. rotundus*, *H. antidysenterica* and *S. album*. Phytosterols were absent in *H. antidysenterica* and *Z. officinale*, proteins were absent in *A. indica*, *P. scrophulariiflora* and *S. album*. Dry powders of plant materials were used for physico-chemical assays. *T.cucumerina* had the highest mean total ash (20.7 %) and water soluble ash (9.7 %) contents. *C. rotundus* had the highest mean acid insoluble ash (9.8 %) content. *P. scrophulariiflora* had the highest mean water-soluble extractable matter (9.3 %) and the ethanol soluble extractable matter (6.9 %). *Z. Officinale* had the highest mean moisture content (14.8 %). Reported physicochemical and phytochemical data under the present study will help in establishing the standardization parameters of the kwatha and the development of High-performance Liquid Chromatography profiling will be recommended for future studies.

Keywords: Amurthashtaka kwatha, Decoction, Physico-chemical, Phytochemical, Extractable matter