

## A Physicochemical and Phytochemical Analysis of *Trikantakadi Kwatha*

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The *Kwatha kalpana* is one of the most effective and widely used liquid dosage forms in Ayurveda pharmaceuticals. *Trikantakadi kwatha* is a classical formulation mentioned in *Bawaprakasha* under *Jvaradhikara*. The *Kwatha* ingredients are *Nidigdika* (*Solanum xanthocarpum* Schrad & Wendl.), *Shunti* (*Zingiber officinale* Roscoe.) and *Amurtha* (*Tinospora cordifolia* (Thunb.) Miers). It is indicated for *Jeerna jwara*, *Aruchi*, *Kasa*, *Swasa* and *Agnimandya*. With the increasing demand for herbal medicines, the standardization of herbal drugs through analytical studies has gained significant importance. The present study was designed to execute organoleptic, physicochemical, and phytochemical analysis of *Trikantakadi kwatha* according to standard protocols. *Trikantakadi kwatha* was prepared according to the method described in *Sharangadhara Samhitha*. The *kwatha* was freeze-dried to obtain the concentrated aqueous extract for the phytochemical analysis. *Trikantakadi kwatha* appeared brownish in color, had a pleasant odor, was bitter in taste and had a liquid consistency. *Trikantakadi kwatha* showed a pH of 5.73, a specific gravity of 1.02 and a total solid content of 1.816% w/v. Preliminary phytochemical screening of the freeze-dried aqueous extract of *Trikantakadi kwatha* exhibited the presence of tannin, alkaloids, saponin, flavonoids, and cardiac glycosides. Thin Layer Chromatogram was performed using Ethanol: Water (1:1 v/v<sup>0</sup>%) solvent system and observed under 256nm and 366nm UV light. HPTLC fingerprint revealed eleven peaks (Rf= 0.01, 0.09, 0.18, 0.22, 0.25, 0.34, 0.38, 0.47, 0.61, 0.63, 0.81) for the extract. This physicochemical and phytochemical analysis along with HPTLC profiling, provides preliminary scientific evidence for *Trikantakadi kwatha*. The phytochemicals present in the *Kwatha* suggest anti-oxidant, anti-inflammatory, anti-microbial, and analgesic actions, which could be useful in therapeutic applications.

**Keywords:** *Kwatha Kalpana, Trikantakadi Kwatha, Physicochemical, Phytochemical, HPTLC*