

## Comparative pharmacognostical, phytochemical and chromatographical analysis of *Sharivadvaya*

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“*Sariva*” is a commonly used medicinal plant in the treatment of fever, dysentery, and skin diseases. Two varieties of *Sariva*; *Krishna sariva* (KS) (*Ichnocarpus frutescens*, family Apocynaceae) and *Sveta sariva* (SS) (*Hemidesmus indicus*, family Asclepiadaceae) are mentioned in Ayurvedic texts. These two are often substituted for each other in the market for therapeutic purposes due to the similar morphological features of their roots, which are the main parts used medicinally. Despite their classification under different plant families, some *Nighantus* describe both plants having comparable *Rasadi pancaka* (Pharmacodynamic properties) and different pharmacological actions. This study aims to compare both botanical sources regarding their pharmacognostical, phytochemical and chromatographical properties. Authenticated plant samples were compared based on microscopic characteristics, phytochemical profiles, and chromatographic analysis. Unicellular trichomes, starch grains and cortical parenchymal cells were found in microscopic views of dry powder of both plants. KS showed rhomboidal calcium oxalate crystals, while SS showed resinous blocks along with fragments of pitted vessels. Ash values were 5.025 % and 4.020% and loss of drying values were 6.68% and 5.78% for KS and SS respectively. Alkaloids, flavonoids, terpenoids, saponins, and tannins were screened from the ethanol extracts of both plants. Chromatographic profiling at 366 nm using a mobile phase of toluene: ethyl acetate: formic acid (8:2:0.1) with vanillin as the standard revealed a few common peaks in SS (Rf values; 0.23, 0.18, 0.11) and KS (Rf values; 0.25, 0.19, 0.06, 0.78) with highest peak area for vanillin found in SS compared to KS (SS: KS, 1078.7:1710.3). These findings confirm that *Krishna sariva* and *Sveta sariva* exhibit some similarities in pharmacognostical properties, and phytochemical characteristics showed that they are histologically and chemically distinct. Quantification of bioactive constituents and the structural identification of active ingredients would provide deeper insights into the potency and efficacy of each variety.

**Keywords:** *Krishna sariva*, *Ichnocarpus frutescens*, *Sveta sariva*, *Hemidesmus indicus*