

**DEVELOPMENT OF NOVEL IMMUNITY ENHANCING HERBAL TEA AND ITS  
STANDARDIZATION AND QUALITY CONTROL**

**W.M.T.H. Wijekoon\*, P.K. Wendabona and N.D. Kodithuwakku**

Faculty of Indigenous Medicine, Faculty of Indigenous Medicine, Sri Lanka.

\*1803818@iim.stu.cmb.ac.lk

The global surge in interest toward natural immunity boosters, particularly in the wake of recent health crises, has driven the demand for scientifically validated herbal formulations. Traditional medicinal herbs with immunomodulatory, antioxidant, and anti-inflammatory properties offer promising solutions. This study focused to develop and standardize a novel herbal tea blend with immune-enhancing potential. Based on traditional usage and documented pharmacological activities, the formulation was developed using *Amalaki* (*Phyllanthus emblica*), *Shariva* (*Hemidesmus indicus*), *Guduchi* (*Tinospora cordifolia*), *Tulasi* (*Ocimum sanctum*), *Shunti* (*Zingiber officinale*), *Ela* (*Ellettaria cardamomum*), *Ashwagandha* (*Withania somnifera*), and *Yashtimadhu* (*Glycyrrhiza glabra*). The formulation underwent quality control and standardization through organoleptic, phytochemical, and physicochemical analysis, along with phytoconstituent profiling using Thin Layer Chromatography (TLC) and High-Performance Thin Layer Chromatography (HPTLC). Organoleptic evaluation showed light reddish-brown color, pleasant aromatic odor, sweet and astringent taste. Physicochemical parameters, including pH (6.0), moisture content (7.42%), total ash (7.86%), acid-insoluble ash (4.73%), and water-soluble ash (6.87%), were within acceptable limits, indicating good quality and stability. Phytochemical screening confirmed the presence of tannins, alkaloids, flavonoids, phenols, terpenoids, and cardiac glycosides, though saponins were absent. TLC and HPTLC analyses revealed five bands and seven peaks at 254 nm and 366 nm, with a maximum R<sub>f</sub> value of 0.70, indicating diverse secondary metabolites. The formulation exhibits promising immunomodulatory potential due to the synergistic action of its phytoconstituents. As the formulation is novel, a toxicity study should be considered for further evaluation. Additionally, clear recommendations addressing potential toxicity concerns are essential to ensure its safe therapeutic application.

**Keywords:** Immunity-enhancing, Herbal tea, Standardization, Quality control