Pharmaceutical preparation and analytical standardization of *Kungiliya Parpam* (KP): A single-herbal Siddha formulation

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The Siddha system of medicine, one of the oldest traditional healing practices in Sri Lanka and India, emphasizes the use of herbal, mineral, and animal-derived preparations for therapeutic purposes. *Kungiliya Parpam* (KP), a single-herbal formulation derived from the resin *Kungiliyam* (*Shorea robusta*), is traditionally used to treat conditions like leucorrhoea (*Vellei*), painful micturition (*Neererivu*), and dysentery (*Seethabedhi*). This study aimed to standardize the preparation and evaluate the physicochemical, organoleptic, morphological, and elemental properties of KP according to Pharmacopeial Laboratory for Indian Medicine (PLIM) guidelines. The drug was prepared using tender coconut water and underwent several cycles of purification and calcination before being powdered. Organoleptic evaluation showed KP to be whitish in colour, odourless, soft in texture, and non-free flowing. Siddha-specific tests confirmed its fineness, absence of taste, buoyancy on water, and lack of luster, indicating purity and adherence to traditional quality markers. SEM analysis revealed uniformly fine particles with sizes ranging from 5 to 10 µm, consistent with expected *Parpam* texture. Physicochemical parameters including pH (8.1), low moisture content (0.23%), high total ash (91.54%), and absence of acid-insoluble ash further confirmed purity and shelf stability. ICP-OES analysis showed the absence of toxic heavy metals such as arsenic, mercury, cadmium, and lead, and detected therapeutically relevant trace elements like calcium, potassium, iron, and zinc. The study validates KP as a safe, standardized Siddha preparation with potential therapeutic applications, supporting its integration into contemporary herbal practice.

Keywords: *Kungiliya Parpam, Shorea robusta, Siddha medicine, Single-herbal formulation, Standardization*