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Comparative Study on Shadanga Panaya Decoction with Developed User-friendly Novel Dosage Form as an Oral Rehydration Powder

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COMPARATIVE STUDY ON *SHADANGA PANAYA* DECOCTION WITH DEVELOPED USER-FRIENDLY NOVEL DOSAGE FORM AS AN ORAL REHYDRATION POWDER

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Ayurvedic physicians have been using *Shadanga panaya* to treat fever with thirst, detoxification, burning sensations of the body and urination processes and dehydration like conditions. Symptoms of COVID-19 have also been treated with these formulae. Due to the lack of reported standardization and quality parameters, this experimental research focused on a comparative study of *Shadanga panaya* with a developed user-friendly novel dosage form as an oral rehydration powder and a literature study on the method of preparation. Development was carried out using a spray-dryer process with the addition of a filler, considering the pros and cons of other techniques, solubility nature, evaluation of physicochemical and organoleptic properties, some important standardization tests under WHO-2012 guidelines, phytochemical analysis, design and comparison of TLC fingerprinting, HPTLC, electrolytes, heavy metals analysis, microbial contamination, and literature study of oral rehydration therapy. *Shadanga panaya* was developed into a spray-dried product only by adding a filler without any excipients. Organoleptic characteristics fulfilled the standards. Preliminary phytochemical screening revealed flavonoids, carbohydrates, saponin, phenols, and glycosides. TLC was developed, and it was found that the aqueous extract of *Shadanga panaya* showed separation. The solvent system for the TLC was Chloroform: Acetone: Glacial acid (15.2:3:1). The comparative TLC study showed identical components with *Shadanga panaya* and its ingredients. The electrolyte composition (Na⁺, Cl⁻, K⁺, Ca²⁺) and pH of the product didn't meet the composition of the Oral Rehydration Solution provided by the WHO and UNICEF. No heavy metals and microbial contaminations were found according to WHO guidelines for assessing quality of herbal medicine for the finished product. This study paves the way for the integration of Ayurveda into contemporary modern pharmaceutical development for the future advancement in healthcare.

Keywords: herbal product development, oral rehydration therapy, *Shadanga panaya*, standardization, TLC