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Formulation and Evaluation of Herbal Syrup For Liver Detoxification Using Phyllanthus Niruri Plant Extract

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Abstract: *The liver plays a critical role in detoxification, metabolism, and overall physiological homeostasis, making it a primary target for various toxins and diseases. Herbal remedies, particularly those derived from traditional medicine, have gained significant attention for their hepatoprotective properties. Phyllanthus niruri, commonly known as "stonebreaker," is widely recognized for its hepatoprotective, antioxidant, and anti-inflammatory activities. This study aims to formulate and evaluate a liver detoxification herbal syrup using Phyllanthus niruri as the principal active ingredient.*
The formulation involved the extraction of Phyllanthus niruri through aqueous and hydroalcoholic methods, followed by incorporation into a syrup base with suitable preservatives, sweeteners, and flavoring agents to enhance patient acceptability. The prepared syrup was evaluated for various physicochemical parameters, including pH, viscosity, density, microbial load, and organoleptic properties. Additionally, preliminary phytochemical screening was conducted to identify active constituents such as flavonoids, alkaloids, tannins, and saponins.
The in vitro hepatoprotective potential of the formulation was assessed using liver enzyme marker assays on hepatocyte cultures exposed to carbon tetrachlorideinduced toxicity.

Keywords: Phyllanthus niruri, liver detoxification, hepatoprotective activity, herbal syrup, formulation, phytochemicals, liver enzymes, traditional medicine, natural remedy, antioxidant

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