

**DEVELOPMENT AND ANALYSIS OF A TOPICAL ANTI-INFLAMMATORY GEL
USING THE TRADITIONAL MEDICINAL PREPARATION OF *NAVAHANDI TELKIRA***

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Navahandi (*Rhipsalis baccifera*), a member of the Cactaceae family is an epiphytic plant with many slender, pendant branched stems. In Ayurveda, it is indicated for bruises, rheumatism, and bone fractures, and its milky sap for warts. *Navahandi telkira* is a special traditional medicinal preparation made using squeezed fresh juice of grinded mixture of *Navahandi* and scraped coconut in equal quantities following the procedure of *Bhaanu paaka taila* (the mixture is concentrated under the sunlight). This *Telkira* was effectively used in *Kadum bidum* (orthopedic) treatments and it is said to be used specifically in inflammatory conditions. This research aimed to analyze the anti-inflammatory action of *Navahandi telkira* using Nitric Oxide (NO) Assay and Human Red Blood Cell (HRBC) Membrane Stabilization Assay (Heat-induced), to analyze phytochemicals, to develop a topical gel and to test gel formulations for different characteristics. The two assays were conducted in comparison to standards; Gallic acid for NO Assay and Aspirin for HRBC Membrane Stabilization Assay (Heat-induced). The tests proved the anti-inflammatory action of *Navahandi telkira* in different concentration series compared to the standards. In NO assay, *Telkira* showed an increased percentage of NO scavenging than the standard in some concentrations. The HRBC assay also showed the anti-inflammatory action going alongside with the standard. It was proven that the preparation consisted of phytochemicals such as reducing sugars, proteins, alkaloids, flavonoids, phenols, tannins, saponins, and fats and oils in different degrees of intensities. Furthermore, with these proven test results for anti-inflammation, the preparation was developed into a topical anti-inflammatory gel using some formulations, and its characteristics such as organoleptic features, homogeneity, and pH measurements were tested compared to a basic gel. As a recommendation, further modifications on the formulations of this traditional medicinal preparation of *Navahandi telkira* are needed to be performed and its efficacy should be tested with appropriate clinical studies.

Keywords: *Navahandi telkira*, Anti-inflammatory, Assay, Phytochemicals, Topical gel