



## Formulation of *Daphne gniduum* L. Leaf Extract-based Topical Gel and Evaluation of Anti-inflammatory Activity

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**Abstract :** *Daphnegnidium*L. has been used in traditional medicine to treat skin diseases, rheumatism and toothache. The objective of the study was to formulate a topical gel from the crudebutanol leafextract of*Daphnegnidium* L. and evaluate itsanti-inflammatory activity in animal model. A preliminary phytochemical screening was carried out for the crude extract. The prepared gel was evaluated for various parameters such as color, appearance, homogeneity, pH, rheological and stability studies. The anti-inflammatory activity was performed in xylene induced mouse ear edema.

The phytochemical screeningrevealed the presence of tannins, flavonoids and coumarines. Organoleptic characteristics and physicochemical properties of gel formulation were found to be satisfactory. The prepared gel showed no irritation on the applied surface up to 24 hrs and possessed a significant reduction of ear edema (76.87 % )compared to marketed gel (standard).

The present study demonstrated that the crudebutanol leafextract of*Daphnegnidium*L has an anti-inflammatory effect when formulated as a gel for topical use. Polyphenolic compound mainly flavonoids may be responsible for this activity. Further preclinical, clinical, and long-term stability on human skin are required.

**Keywords :** Anti-inflammatory;Crude extract; *Daphne gniduum*L.; Formulation;Topical gel.