



Original Research Article

Pharmacognosy for efficient natural therapy

## Formulation and Evaluation of Topical Herbal Gel for Rheumatoid Arthritis using some Medicinal Plants

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**Abstract:** Inflammatory diseases including different types of rheumatic diseases are the major causes of morbidity of the working people throughout the world. The objective of the study is to formulate and evaluate a topical herbal gel containing ginger rhizomes, curcuma rhizomes, ashwagandha roots, chilli fruits for their anti-inflammatory activity in Albino Wistar rats. The growing interest in herbal therapies among peoples with rheumatoid arthritis, creates a need for investigation into their safety and efficacy. Three herbal gel formulations were prepared using 2% of gelling agent carbopol 934 and were evaluated for the parameters like physical appearance, net content, viscosity, extrude ability, pH, Spred ability, *in vitro* diffusion profile and primary skin irritation tests. The stability study for the topical herbal gel formulation was done as per ICH guidelines. The pH of all the formulations was near about 7, which lies in the normal pH range of the skin. The final selected formulation was orange in colour with a translucent appearance homogenous, stable, viscosity of  $1.0 \times 10^3$  and cooling sensation throughout the evaluation period and complied with guidelines. During skin irritation test, no erythema or edema was observed evidencing the gel to be nontoxic and safe for topical use. The results of our study revealed the preparation was stable under normal storage conditions. A thorough investigation into the stability characteristics of the gel formulation over an extended period of time may provide scope for its therapeutic use for patients. It also provides better information regarding the formulation and evaluation parameters of the novel herbal gel for anti-inflammatory activity and to provide better therapeutic effects to patient compliance.

**Keywords:** Gel Formulation, Rheumatoid arthritis, Edema, Gelling agent, carbopol.

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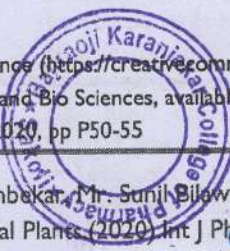
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