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Development and Evaluation of Herbal Pain Relief Gel

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Abstract: *This study focuses on the development and evaluation of a novel herbal pain relief gel as a potential alternative to conventional analgesics. The gel was formulated using a combination of well-established herbal extracts known for their analgesic and anti-inflammatory properties. The formulation was optimized through a systematic approach, considering various factors such as the concentration of herbal extracts, gelling agent, and permeation enhancers. The developed gel was subjected to a series of in vitro and in vivo evaluations to assess its efficacy and safety. The in vitro studies included drug release studies, permeation studies using artificial membranes, and assessment of anti-inflammatory activity using cell-based assays. The in vivo studies were conducted using animal models of pain and inflammation to evaluate the analgesic and anti-inflammatory effects of the gel. The results of the study demonstrated that the developed herbal pain relief gel exhibited promising analgesic and anti-inflammatory properties in both in vitro and in vivo studies. The gel was found to be safe and well-tolerated, with no signs of local irritation or toxicity. The study concludes that the developed herbal pain relief gel has the potential to be an effective and safe alternative for the management of pain and inflammation*

Keywords: herbal pain relief gel, analgesics, anti-inflammatory, herbal extracts, in vitro evaluation, in vivo evaluation