

POSTER PRESENTATIONS

DEVELOPMENT OF A WOUND-HEALING OINTMENT BASED ON *Linaria vulgaris* MILL. EXTRACT

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Medicinal plants are considered a promising source of wound-healing agents owing to the combined action of biologically active compounds and their favorable safety profile. *Linaria vulgaris* Mill. (common toadflax), widely distributed in Central Kazakhstan, contains flavonoids, phenolic acids, and other biologically active compounds; however, its wound-healing potential remains insufficiently explored. The aim of this study was to develop and evaluate the efficacy of a topical dosage form based on a thick extract of *L. vulgaris* Mill. for wound treatment.

A thick extract was obtained by maceration using 96% ethanol, selected on the basis of chemometric analysis. A 5% emulsion ointment containing the extract was developed. The rheological properties of the formulation were evaluated by rotational viscometry. Wound-healing and anti-inflammatory activities were assessed using a thermal burn model in rats, with **10% Methyluracil ointment** as the reference treatment and an untreated control group.

The yield of the thick extract was **9.19 ± 0.16%**. The developed ointment exhibited pseudoplastic and thixotropic flow behavior, ensuring structural stability during storage and ease of application. In the thermal burn model, the wound area in the group treated with the *L. vulgaris* ointment decreased to **30%** by day 7, compared with **55%** in the reference treatment group and **75%** in the untreated control group. In addition, earlier epithelialization of the wound surface was observed in the treatment group.

The developed 5% ointment based on a thick extract of *L. vulgaris* Mill. demonstrated satisfactory technological and rheological properties together with pronounced wound-healing activity, outperforming the reference treatment in terms of burn wound regeneration. These findings support the potential of this plant-based formulation for further preclinical investigation and development as a topical wound-healing agent.

Keywords: *Linaria vulgaris* Mill., thick extract, emulsion ointment, wound-healing activity, rheological properties.

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