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PREPARATION AND PHYSICOCHEMICAL EVALUATION OF STABLE HERBAL GEL FROM *MALVA SYLVESTRIS* AND IN VITRO RAT SKIN ABSORPTION

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Malva Sylvestris (Malvaceae) which is native to Europe, North Africa and South-west Asia, commonly used as vegetable and a medicinal plant in Iran. The plant leaves and flowers are used as a remedy for cut wound, eczema, dermal infected wounds, and skin local inflammations from long time ago [1]. The aim of this research was to develop gel formulation of *M. Sylvestris* for topical delivery in skin ulcers and inflammations.Leaves of *M. Sylvestris* were collected, dried and hydroalcoholic extract was achieved using maceration method with ethanol-water (80:20) for 72 hrs. The extract was then concentrated and total phenolic and flavonoids compounds was detected using spectrophotometric method using Folin ciocalteu reagent and Quercetin as standard [2,3]. Total phenolic and flavonoids contents of extract was 4.7±0.1and 1.9±0.1 mg Quercetin/g respectively. Thegel baseswaspreparedfromCarbomer which had better sustainability compared to Na CMC and Methyl Cellulose after loading extract. Carbomer base was mixed with 1, 5 and 10 percents of extract and the base containing 10% extract had acceptable phenolic and flavonoids compounds comparison to pure extract. Then the percentage of glycerin was increased from 2% to 40 % to improve phenolic and flavonoids contents release. The bestformulation (F9) consisted of Carbomer (3%), *M. Sylvestris* extract (10%) Tristhanolamine(q.s.) and water (q.s.) with thixotropy.The release profile of extract in F9 was evaluated using franz diffusion cell and rat skin absorption detecting phenolic and flavonoids contents. the stability studies were performed and the results showed stable gel after 3 months.

References

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