



Preparation of a topical herbal formulation for hyperpigmentation

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Background and objectives: Skin hyperpigmentation usually indicates an increase in production and accumulation of melanin. Hyperpigmentary disorders are characterized by the appearance of melasma, freckles and lentigo on the skin surface which can cause psychological disturbances. Herbal products could be extensively preferable due to their widespread accessibility and the vast experiential data retrieved from traditional medicine since many current products present undesired side effects. *Rheum palmatum* L. and *Rosa canina* L. are two herbal remedies proposed by Iranian traditional medicine for hyperpigmentation whose tyrosinase inhibitory effect have been revealed in modern literatures. The aim of this research was to prepare a topical cream formulation from *R. palmatum* rhizome and *R. canina* fruit extracts and study its physicochemical characteristics. **Methods:** Subsequent to performing the plants quality control tests and extraction, several formulations with different oily phase components were tested for selecting an appropriate cream base. In addition to physical characteristics and accelerated stability studies, total phenolics content of the herbal formulation was determined using Folin-Ciocalteu reagent. **Results:** Herbal o/w cream containing 2.5% of each hydroalcoholic extract of *R. palmatum* and *R. canina* was prepared using almond oil, eucerrin and stearyl alcohol as the oil phase components. The herbal cream showed acceptable pharmaceutical behavior as well as considerable phenolic content (8.81±0.78 mg/g). **Conclusion:** The prepared herbal topical cream could be introduced as a natural formulation for further studies in the field of hyperpigmentation. Moreover, phenolics content of the product could be considered as an indicator for its quality control.

Keywords: herbal cream, hyperpigmentation, phenolic compounds, *Rheum palmatum*, *Rosa canina*
