

Formulation and Evaluation of Rose Oil Nanoemulsion %0.1 on Skin Properties

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Abstract

Introduction: One of the causes of the skin drying is lack of oil secretion by sebaceous glands in skin. Then this can make skin sensitive to environmental factors and some substances. Ancient Iranians have used rose water for washing the face and increase moisture of skin. Nano-emulgel Due to its high stability, biocompatibility and proper solubility in water are considered as good carriers for targeted drug delivery, and have a good potential for drug delivery because they have the properties of nanoparticles of colloids and hydrogels simultaneously. In this research, effects of rose oil nanoemulgel %0.1 are evaluated on the normal and dried skin.

Methods and Results:

Different formulations of rose oil were evaluated using suitable surfactants. Then the best ratio of nano-emulgel Red flowers and sustainability criteria were determined. Rose oil components were identified by GC/MS. Clinical studies were conducted for an eight-week on 60 healthy volunteers in two groups. A nano-emulgel %0.1 rose oils and other non-essential emulgel with the same basic materials were used and the amount of sebum secretion, melanin, skin redness, hydration and elasticity of the skin and also complications were determined. Quantitative data analysis was done by using Chi-square test and $P \leq 0.05$ were considered significant. The results have demonstrated the effectiveness of the rose oils in skin hydration. Two groups with other characteristics such as the skin secretion of sebum, elasticity, pigmentation, and redness have shown similar effects. However, both groups did not show any complications.

Conclusions:

In this study, the main ingredient of essential oil is alcohol. The most important terpene alcohols are, 31% Nonadecane, 38% Citronellol, 23% Linalool, and 17% Heneicosane. The good effectiveness of Rose oil on increasing of skin moisture is the appropriate treatment of skin drying.

Key words: Rose oil, Nano-emulsion, hydration, Skin Elasticity