

عنوان مقاله:

Preparation and Evaluation of Etodolac Nanoemulsion

محل انتشار:

مجله علوم دارویی و شیمی، دوره 5، شماره 5 (سال: 1401)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Ahmed H. Hussein - *Department of Pharmaceutics, College of Pharmacy, University of Al Kafeel, Najaf, Iraq*

Walla Mohamad - *Department of Pharmaceutics, College of Pharmacy, University of Al Kafeel, Najaf, Iraq*

Ahmed D. Abid Muslim - *Najaf Health Directorate, Ministry of Health Najaf, Iraq*

Ali I. Salman - *Department of Pharmaceutics, College of Pharmacy, University of Al Kafeel, Najaf, Iraq*

Mohannad F. Abdu Al-Hussein - *Najaf Health Directorate, Ministry of Health Najaf, Iraq*

Ameer M. Muhammad - *Najaf Health Directorate, Ministry of Health Najaf, Iraq*

Zharaa A. Hassan - *Najaf Health Directorate, Ministry of Health Najaf, Iraq*

خلاصه مقاله:

Emulsions could be defined as heterogeneous system thermo-dynamically unstable of a two-phase system consisting of at least two immiscible liquids. A third component, the emulsifying agent, is necessary to stabilize the emulsion. Etodolac is used to relieve pain, swelling, and joint stiffness from arthritis. The local administration of the drug topically will avoid the systemic side effects besides some advantages making it a superior dosage form. The present study aims to formulate and evaluate nanoemulsion composed of different oils and surfactant system systems and find the best microemulsion formula in terms of particle size and stability. The present study includes making different emulsion formulas and implementing etodolac into them. The formulas were made by wet gum using DW, oils (almond and eucalyptus), and surfactants (tweens, span, and triton X). Experiments were then done on the formulas to choose successful ones to put etodolac into. One of the successful formulas had etodolac implemented into them and further experiment were done after. Finally, etodolac was tested in-vivo in the form of cream to see its efficacy by a pharmacologist. Results revealed that all prepared formulas succeeded in giving emulsion but with variable degree of properties and stability. Their pH are acidic with no sensitization to skin. Selected formula Fe₂ contains eucalyptus oil and a mixture of tween₈₀ and triton x is the best formula in terms of stability, reliability, and globular size. Upon addition of etodolac drug formula still stable and globular size is small and uniform under laser diffraction analyzer. Eucalyptus and almond oils can give stable emulsion. Oil in water emulsion type is predominant in all prepared formulas. A stable and promising formula was obtained with no sensitization was seen, and this formula is ready to be applied to human skin after some more tests to be marketed as microemulsion formula for the analgesic drug etodolac.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1440646>

