

Nanosized Soy Phytosome-Based Thermogel as Topical Anti-Obesity Formulation: an Approach for Acceptable Level of Evidence of an Effective Novel Herbal Weight Loss Product

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Abstract

Obesity has become an increasing problem over recent years. Nano lipo-vesicles thermogel of soy extract were formulated and evaluated in an attempt to reduce the size of adipose tissue cells through percutaneous absorption. Phytosome formulations were prepared with three different techniques: solvent evaporation, anti solvent precipitation and co-solvency .

Optimized formulae was selected using Design Expert® (Version 7.0.0, Stat-Ease Inc. Minneapolis, MN) the means of the highest entrapment efficiency, minimum particle size and maximum drug release and then evaluated for successful complex formation by means of FTIR. Particles zeta potential was detected. Particles shape was evaluated using TEM to insure particles spherical shape and non aggregation. Optimized phytosome formulae was involved into selected thermogel formulation after evaluation of different plain formulations for calrity.homogenity, pH, gel transforming temperature and viscosity.

Phytosomal thermogel formulation was then re-evaluated for its clarity, homogeneity, pH and gel transforming temperature and for its rheology behavior and permeation study. In vivo study was done to ensure anti -obesity effect of soy phytosomal hydrogel.

Concisely, soy phytosomal thermogel was found to have the ability to reduce the size of adipose tissue cells of the abdomen in male albino rats.

Biography

Nermeen Magdy is a demonstrator at pharmaceutics department, faculty of pharmacy, Nahda University Beni-suef, Egypt and reviewer in the journal of Pharmaceutical research (Springer) that has an experience in formulation and evaluation of different dosage forms besides ability of teaching different courses. Foundation is based on phytosome as a nanotechnology advanced preparation that is perfect in interaction with natural active constituents to yield a high entrapment efficiency and high ability of transdermal drug delivery.

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