Manuscript ID : 00001-60723

Source ID : 00000538

International Journal of Applied Pharmaceutics

Volume 13, Issue 4, July-August 2021, Pages 47-54, Page Count - 8

METHODS FOR IMPROVING ALPHA-MANGOSTIN SOLUBILITY: A REVIEW

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Abstract

Solubility is an important parameter to achieve for the bioavailability of a drug to reach the therapeutic windows. Garcinia mangostana Linn is a plant with great potency for the development of natural medicine. Alpha-mangostin is one of the secondary metabolites of G. mangostana and has been reported to have several pharmacological activities. The Biopharmaceutics Classification System (BCS) is a system that classifies drugs based on their solubility and permeability. Due to its low solubility but high permeation, alpha-mangostin is categorized into class II of the Biopharmaceutics Classification System. Therefore, the determination of dosage forms and modification of solubility enhancers is limited due to its physical properties, as mentioned above. This disadvantage requires new methods to improve its solubility to administer alpha-mangostin, especially for oral administration. Here, we discuss the development of the methods to increase alpha-mangostin solubility to be applied to formulate a dosage form to reach a useful plasma level for medication.

Author Keywords

Alpha-mangostin, Solubility, Drug delivery system

ISSN Print:
Source Type: Journals
Publication Language: English
Abbreviated Journal Title: Int J App Pharm
Publisher Name: Innovare Academic Sciences Pvt Ltd
Major Subject: Life Sciences

Subject area: Pharmaceutical Science

ISSN Online: 0975-7058
Document Type: Review Article
DOI: https://dx.doi.org/10.22159/ijap.2021v13i4.39065
Access Type: Open Access
Resource Licence: CC BY-NC
Subject Area classification: Pharmacology, Toxicology and Pharmaceutics
Source: SCOPEDATABASE

Reference