



ISSN: 2456-0729

Available Online at <http://www.bjbr.in>

BRITISH JOURNAL OF BIO-MEDICAL RESEARCH

Open Access Online Journal of Science and Technology, Volume 05, Issues 01-Jan - Feb 2021

Research Article

Formulation and In-vitro Evaluation of Tolbutamide Nanoponges

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ARTICLE INFO

Article History

Received on 19th January 2021

First Received on 28th Jan 2021

Revised on 11th February 2021

Published on 24th February 2021

Keywords

Tolbutamide, FTIR, SEM, DSC, XRD, Hydroxyethylcellulose, Chitosan, PVA, In-Vitro drug release

ABSTRACT

In this study we work for characterization and development of Nanoponges-tolbutamide oral formulations using poly(ethylene glycol)-copolymer. Efficient targeted medication transport methods have been a fantasy for many decades. Nanoponges drug transport method has appeared as one of the promising disciplines of new drug delivery technologies. Recently, the Nanoponges drug delivery technology has become a major development in resolving some biopharmaceutical issues. The Nanoponges targets the medication in the systemic circulation of the body before it meets the specific target surface and begins to release the drug in a regulated and controlled manner. Nanoponges medication release devices have been filled with hydrophilic and lipophilic drug material in a wide variety of drug molecules. The Nanoponges then serves as

an appropriate target carrier molecule. In the Nanoponges method, the medication may be delivered at a precise location that prevents the drug from degrading proteins, prolonging drug release in a predictable form. There was no significant correlation between the drug and the excipients as seen in the FTIR and DSC analysis. Prepared nanoparticles with spherical morphology have been shown to be robust in nanoscale range. The surface of the tablet, which has an explosive effect and an immediate start to activity, exposes free substance particles. Drug release studies suggest the controlled release of narcotic into the polymeric matrix. This research showed the effective use of enhanced solubility and absorbed the tolbutamide-loaded nano-carrying unit with continuous drug release profiles.

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