

Fast disintegration tablets: Problems and Evaluation

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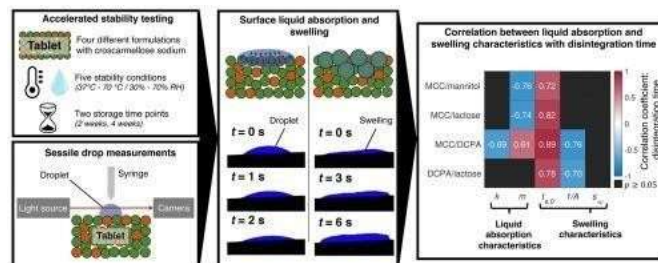
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Abstract

Responding to the present demand of the fast Disintegration tablets, this study offers a trace-up analysis of the fast disintegration tablets to examine the ways of preparation and evaluation processes. It studies the short method to serve the patient who cannot swallow tablets for some reasons. The process of disintegration of pharmaceutical tablets is a crucial step in the oral delivery of a drug. Tablet disintegration does not only refer to the breakup of the inter-particle bonds, but also relates to the liquid absorption and swelling behavior of the tablet.

- 1- The study shows the use of the sessile drop method, analyzing the surface liquid absorption and swelling kinetics of four filler combinations (microcrystalline cellulose (MCC)/mannitol, MCC/lactose, MCC/dibasic calcium phosphate anhydrous (DCPA) and DCPA/lactose) with croscarmellose sodium as a disintegrant. Changes in the disintegration performance of these formulations were investigated and analyzed by quantifying the effect of compression pressure and storage condition on characteristic liquid absorption and swelling parameters.
- 2- The results indicate that the disintegration performance of the MCC/mannitol and MCC/lactose swelling characteristics affect the disintegration time, whereas DCPA/lactose tablets is primarily controlled by swelling characteristics of the various excipients. The analytic approach and discusse in this study enables a rapid (<1 min) assessment of characteristic properties that are related to tablet disintegration, to inform the design of the formulation, process settings and storage conditions



Work Cited

- 1- G. Szakonyi, R. Zelkó, Prediction of oral disintegration time of fast disintegrating tablets using texture analyzer and computational optimization, International Journal of Pharmaceutics, Volume 448, Issue 2, 2013, Pages 346-353.
- 2- Jakub Dvořák, Jan Tomas, Denisa Lizoňová, Marek Schöngut, Ondřej Dammer, Tomáš Pekárek, Josef Beránek, František Štěpánek, Investigation of tablet disintegration pathways by the combined use of magnetic resonance imaging, texture analysis and static light scattering, International Journal of Pharmaceutics, Evaluation of an external lubrication system implemented in a Compaction simulator International Journal of Pharmaceutics, Volume 587, 2020
- 3- Léo Desbois, Pierre Tchoreloff, Vincent Maze Characterization modeling of the viscoelasticity of pharmaceutical tablets International characteristic propertie
- 4- Daniel Markl, Natalie Maclean, James Alexander Abbott, Heather Mead, Ibrahim Khadra, Mann, Helen Williams, Tablet disintegration performance: Effect of compression pressure and storage conditions on surface liquid absorption and swelling kinetics, International Journal of Pharmaceutics, Volume 601, 2021.
- 5- Cedrine de Backere, Thomas De Beer, Chris Vervaet, Valérie Vanhoorne, Volume 587, 2020.

Keywords: Streptomyces griseocarneus; Antitumor; Hydrated Magnesium Sulphate; Potassium dihydrogen Phosphate; Dipotassium Hydrogen Phosphate; Bacterial resistance; Antimicrobial activity; Fermentation; Sensitivity;

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Biography

Nawaf Ali Musleh Saleem is a Yemeni scholar and has completed his bachelor of Pharmacy from Kakatiya University, India, He has worked on Formulation and Evaluation of Canaglifozin Sustain Release Matrix Tablets. He has many experiences in the field of pharmaceutical medicine.
