









Home ► All Journals ► Bioscience ► Drug Development and Industrial Pharmacy ► List of Issues Volume 26, Issue 4 ➤ Solubility and Dissolution Properties of

Drug Development and Industrial Pharmacy >

Volume 26, 2000 - Issue 4

693 51 3 Views CrossRef citations to date Altmetric

Research Article

Solubility and Dissolution Properties of Generic Rifampicin Raw Materials

S. Q. Henwood, M. M. de Villiers, W. Liebenberg & A. P. Lötter

Pages 403-408 | Published online: 04 Jun 2000

66 Cite this article ▶ https://doi.org/10.1081/DDC-100101246













Reprints & Permissions

Read this article



Abstract

Rifampicin shows polymorphism; therefore, it is necessary to select a suitable crystal form at an early stage of development to ensure optimum solubility and dissolution rates. This study was an investigation into the crystal properties of several rifampicin raw materials currently being used by manufacturers of generic rifampicin raw materials in South Africa. Powders were characterized by X-ray diffraction (XRD), infrared (IR) spectroscopy, and differential scanning calorimetry (DSC). The solubility in water and dissolution properties in water, buffer pH 7.4 and 0.1 M HCl, were also measured. The main difference between the powders was the amorphous content. XRD, IR, and DSC methods could detect the presence of amorphous rifampicin. In contrast to expectations, an increase in amorphous content significantly reduced the dissolution rate of the powders in water and buffer pH 7.4. This behavior was attributed to the

electrostatic properties of the very fine particles in the amorphous powders. The results of this study showed that the physical properties of rifampicin raw materials varied not only among manufacturers, but also among batches from the same manufacturer.

Key Words:





People also read

Recommended articles

Cited by 51

Information for

Authors

R&D professionals

Editors

Librarians

Societies

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Open access

Overview

Open journals

Open Select

Dove Medical Press

F1000Research

Help and information

Help and contact

Newsroom

All journals

Books

Keep up to date

Register to receive personalised research and resources by email



Sign me up











Accessibility



Copyright © 2025 Informa UK Limited Privacy policy Cookies Terms & conditions



Registered in England & Wales No. 01072954 5 Howick Place | London | SW1P 1WG