

## Book reviews

### ***Pharmaceutical emulsions and suspensions.***

Francoise Nieloud, Gilberte Marti-Mestres (Editors) Marcel Dekker, New York, 2000; 637 pages, \$165; ISBN 0-8247-0304-9

This book is Volume 105 in the renown Drugs and the Pharmaceutical Sciences Series. Its intention is to cover the unique and specific aspects which are related to suspensions and emulsions when they are used pharmaceutically.

The book can be divided into three sections and comprises 17 chapters. The first section of the book deals with basic concepts. Chapter 1 provides information about main surfactants used in the pharmaceutical field. The authors review anionic, cationic and non-ionic surfactants and report in tables all surfactants that appear in the British, European, and US Pharmacopeia or that are listed in Martindale Extra Pharmacopeia. In the next chapter, Jean-Louis Salager gives a survey of formulation concepts for the emulsion maker. He extensively discusses the influence of formulation on phase behaviour of emulsion systems. He sets up the formulation and composition variables framework, which is used in the next chapter (written by the same author) to describe the relationship between formulation and emulsion properties. The last chapter in the first section focuses on suspension formulation. Within 64 pages, the authors describe the main properties of solid–liquid interfaces placing special emphasis on the thermodynamic and electrical quantities. The text includes classical concepts as well as more recent approaches.

Part 2 covers health applications. It describes emulsions and suspensions as drug delivery systems and with respect to the routes of application. Nine chapters written by experts in their field provide up-to-date information about topical, transdermal, ophthalmic, parenteral, and gastrointestinal use of various dispersed systems.

The last section contains 4 chapters on tools and methods for the experiments and measurements. The first two chapters of this part are devoted to experimental designs. One covers theoretical aspects and the other covers applied aspects. The authors encourage the reader to use these tools for reducing the number of experiments when formulating pharmaceutical emulsions and suspensions and for gaining a better understanding of formulation parameters.

The final chapters of the book teach about theory and practice of rheological measurements of dispersions and determination of size distributions of submicron particle dispersions by photon correlation spectroscopy.

This book offers a lot of information on pharmaceutical

dispersed systems. It brings together the general physico-chemical aspects as well as the more advanced and specific aspects of pharmaceutical formulations. The book is written on a postgraduate level by authors coming from academia as well as from industry. It should be useful to pharmacists, graduate students in the pharmaceutical sciences and professionals working in industrial research and development. For the practitioners it might be helpful that many chapters contain practical examples. Unfortunately, some of the examples shown for experimental design are not closely related to pharmaceutical emulsions and suspensions. Most chapters provide numerous bibliographic citations that give easy access to the relevant and up-to-date literature on disperse systems.

All in all, this book can be recommended to those who are searching for an easily readable guide to the fundamentals and applied aspects of emulsions and suspensions with special emphasis on pharmaceutical systems.

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### ***Biomaterials and Bioengineering Handbook.***

Donald L. Wise (Editor) Marcel Dekker, New York, 2000; 944 pages, US\$235; ISBN 0-8247-0318-9

Biomaterials and bioengineering present immediate fields of interest for a multitude of specialists ranging from engineers, physicians and chemists to physicists and pharmacists. However, the spectrum of aspects that may be covered by a handbook on this topic is as broad as the spectrum of scientists participating in biomaterials research. Consequently, the book can not be compared to the much larger 'Encyclopedia of biomaterials and bioengineering' also edited by Donald Wise or 'The biomedical engineering handbook' edited by Joseph Bronzino, both of which are several thousand pages in length. The new handbook deals with specific aspects and integrates basic science, engineering and medical experience focusing on material develop-