

Book review

***Pharmaceutical Emulsions and Suspensions*,
Edited by, F. Nielloud and G. Marti-Meatres. ISBN
0-824-0304-9**

Suspensions and emulsions are complex dispersed systems and an understanding of the concepts underlying their formulation and stability requires knowledge of the fundamentals of colloid science. On the other hand, a formulator requires practical knowledge to apply these principles to attain acceptable dosage forms. This volume aims to marry these two aspects providing both theoretical and practical approaches to the formulation of emulsions and suspensions and their utilisation for a variety of routes of administration. To a large extent, it succeeds in fulfilling this aim.

The book is presented in three sections, the first reviewing fundamental aspects of the physical chemistry underlying the formulation and stability of these systems. A useful introductory chapter by the editors reviews the variety of surfactants used in pharmaceutical formulation. Emulsion formulation is dealt with in two chapters that cover such topics as phase behaviour, HLB, phase inversion temperature, droplet size and stability. This section concludes with a detailed treatment of suspension formulation including wetting phenomena, electrical properties, and stability. These introductory chapters not only cover the thermodynamic and kinetic aspects but also, present the topic from the view point of the formulator as can be inferred from subheadings such as *How to measure stability*, *What is really the emulsion viscosity?* *Modifying emulsions without inversion*, and *Experimental determination of zeta potential*.

Part 2 of the book, headed *Health Applications*,

is devoted to the application of emulsions and suspensions as vehicles for drug delivery and deals with parenteral fat emulsions, emulsions and vesicles as topical drug delivery systems, ophthalmic emulsions and suspensions, nanosuspensions for the formulation of poorly soluble drugs, dry absorbed emulsions, and the administration of emulsions to the gastrointestinal tract. As with most chapters in this book, extensive reference lists are provided and the text is well illustrated with examples from the pharmaceutical literature. In general, the topics are discussed critically, often highlighting the authors' views on expected developments in the area.

The final section reviews aspects of experimental design, the application of experimental methodology, the rheology of suspensions and emulsions, and the determination of size distribution. Again, these follow a mix of theory and application. I would have welcomed more details of the technique of diffusing wave spectroscopy in the authoritative chapter on light scattering methods for particle size analysis, in view of the potential application of this technique in the sizing of suspensions.

The book will be of use as both a reference text and a practical manual for workers in the area of pharmaceutical sciences in academia and industrial research and development. It is a very welcome addition to the series '*Drugs and the Pharmaceutical Sciences*'.

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