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Book Review

Handbook of Modern Pharmaceutical Analysis, Vol. 3
S. Ahuja, S. Scypinski (Eds.); Academic Press, San Diego, USA, 2001, xix + 600 pages, ISBN 0-12-045555-2, £99.95

The development of advanced instrumental techniques has allowed further analysis of pharmaceuticals and is not just focused on, for example, analysis of active pharmaceutical ingredients. Ultimately modern pharmaceutical analysis can allow a deeper understanding into physicochemical properties and deliver a market safe, efficacious product.

The role of analytical research and development is highlighted in the *Handbook of Modern Pharmaceutical Analysis* with chapters structured on a process-driven basis. The book commences with an outline of modern pharmaceutical analysis followed by chapter 2 discussing the coupled used of combinatorial chemistry with high-throughput screening in novel drug discoveries and optimisation processes. Chapter 3 assesses the physical properties of solids at the molecular, particulate and bulk level that is of importance to selecting the formulation, subsequent improvements can be made to prevent degradation products and impurities occurring (chapter 4). Chapters 5–7 cover preformulation studies, solid dosage-form analysis and parenteral dosage forms, respectively. Chapter 8 discusses the analytical challenges of novel drug delivery systems. This is followed by a lengthy discussion of the subsequent pharmaceutical analysis carried out which entails compendial testing, method development, setting up specifications and method validation (chapters 9–12). Chapter 13 describes stability studies to ensure the product has maintained its identity, strength, quality and purity. Chapter 14 looks at the transfer of the analytical methodology of a new drug product. The penultimate chapter reviews the importance of documentation containing data that complies with the governing regulatory guidance and policies. The remaining chapter outlines new analytical platforms such as microfabricated electrophoresis and its application in analysis of small molecules, peptides, proteins and DNA.

In general, the handbook covers various aspects of pharmaceutical analysis and would be invaluable to those who are interested in this field of work. There are comprehensive sets of references at the end of each chapter.

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