
Description: An examination of all aspects of the science and art of dosage form development

Integrating physical pharmacy, drug design, and drug regulation, this book examines all the key elements needed to produce effective dosage forms for drug delivery. It begins by setting a solid foundation of physical pharmacy principles such as drug stability estimation, rheology, and interfacial properties. Next, the authors explain how to incorporate these principles into product design. Lastly, the book integrates harmonized pharmaceutical development regulatory guidelines and requirements with the science and technology of pharmaceutical product design in the United States, European Union, and Japan.

Integrated Pharmaceutics offers a comprehensive portrait of pharmaceutical product design, fully describing the science and art of dosage form development. Readers will find clear and thorough coverage of:

- Fundamental physical pharmacy principles and their role in drug product design
- Regulatory science section covering drug regulation, pharmacy compounding practices, manufacturing validation, and quality systems and controls
- Recent regulatory guidelines for quality by design, design space analysis, process analytical technology, polymorphism characterization, blend sample uniformity, stability protocols, and biopharmaceutical classification systems

Each chapter includes a glossary defining key terms and a list of references leading to the primary literature in the field. Many of the chapters also feature case studies, reference appendices, and practical problems, enabling readers to apply the principles set forth in the book to solve common problems in drug product design.

With its comprehensive, multidisciplinary approach, Integrated Pharmaceutics is recommended for graduate-level courses in pharmacy, the pharmaceutical sciences, pharmaceutics, physical pharmacy, drug formulation and design, and biomedicine. The book will also enable professionals in the pharmaceutical industry to apply an effective integrated approach to drug product design.

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