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Lead Identification and Lead Optimization; 2.3.1 Dried-Down Solution Methods; 2.3.2 Solubility from Solid; 2.3.3 Thermodynamic Solubility Assays with Solid-State Characterization; 2.3.4 Solubility by Potentiometry
 2.3.5 Application of Thermodynamic Solubility Data in LI and LO2.4 Conclusions; References; 3 Gastrointestinal Dissolution and Absorption of Class II Drugs; 3.1 Introduction; 3.2 Drug Absorption and the BCS; 3.3 Class II Drugs; 3.4 GI Physiological Variables Affecting Class II Drug Dissolution; 3.4.1 Bile Salts; 3.4.2 GI pH; 3.4.3 GI Transit; 3.4.4 Drug Particle Size; 3.4.5 Volume Available for Dissolution; 3.5 In Vitro Dissolution Tests for Class II Drugs; 3.5.1 Biorelevant Media; 3.5.2 Dynamic Lipolysis Model; 3.6 BCS-Based FDA Guidelines: Implications for Class II Drugs
 3.6.1 Potential of Redefining BCS Solubility Class Boundary3.6.2 Biowaiver Extension Potential for Class II Drugs; 3.7 Conclusions; References; 4 In Silico Prediction of Solubility; 4.1 Introduction; 4.2 What Solubility Measures to Model?; 4.3 Is the Data Set Suitable for Modeling?; 4.4 Descriptors and Modeling Methods for Developing Solubility Models; 4.5 Comparing Literature Solubility Models; 4.6 What Is the Influence of the Domain of Applicability?; 4.7 Can We Tell when Good Predictions Are Made?; 4.8 Conclusions; References
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 5.6.1 Calculated Hydrogen-Bonding Descriptors

Sommario/riassunto

The gold standard for industrial research now completely revised in line with current trends in the field, with all contributions extensively updated or rewritten. In 21 chapters readers can benefit from the key working knowledge of today's leading pharmaceutical companies, including Pfizer, AstraZeneca, and Roche. Drug developers from industry and academia present all the factors governing drug bioavailability, complete with practical examples and real-life data. Part I focuses on in vitro and in vivo measurements of physicochemical properties, such as membrane permeability and ioniza