

ROLE OF PREFORMULATION IN DEVELOPMENT OF SOLID DOSAGE FORMS

OMATHANU P. PERUMAL AND SATHEESH K. PODARALLA

South Dakota State University, Brookings, South Dakota

Contents

- 1 Introduction
- 2 Physical/Bulk Characteristics
 - 2.1 Crystallinity and Polymorphism
 - 2.2 Hydrates/Solvates
 - 2.3 Amorphates
 - 2.4 Hygroscopicity
 - 2.5 Particle Characteristics
 - 2.6 Powder Flow and Compressibility
- 3 Solubility Characteristics
 - 3.1 pK_a and Salt Selection
 - 3.2 Partition Coefficient
 - 3.3 Drug Dissolution
 - 3.4 Absorption Potential
- 4 Stability Characteristics
 - 4.1 Solid-State Stability
 - 4.2 Solution-State Stability
 - 4.3 Drug–Excipient Compatibility
- 5 Conclusions
- References