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TEXT BOOK ON PRINCIPLES OF PHYSICAL PHARMACEUTICS - I

About the Book

Physical pharmaceutics is the branch of pharmacy which deals with the applications of physics and chemistry to understand the principles of pharmacy. These concepts help in designing and manufacturing of dosage forms. Text book on principles of physical pharmaceutics serves as a basis for addressing the concepts of solubility, states of matter, surface tension, interfacial phenomena, complexation, protein binding and buffers.

Features

- Chapter one helps in understanding the fundamental principles of solubility, solvents, mechanism of solute solvent interactions, factors controlling solubility, significance of distribution coefficient in pharmaceutical systems and ideal & real solutions.
- Chapter two describes the properties of states of matter, discusses supercritical states to illustrate the utility of supercritical fluids and principles of physicochemical properties to determine the molecular properties.
- Chapter three explains the terms surface tension & interfacial phenomenon and their applications, calculating surface free energy, work of cohesion & adhesion, spreading coefficient, HLB of surface active agents and mechanism of adsorption on liquids and solid interfaces.
- Chapter four emphasizes the physical properties of complexes, pharmaceutical applications, methods of analysis of complexes, stoichiometric ratio and stability constant for complex formation, understand the thermodynamic basis for the stability of complexes and discuss the protein binding and influence of drug action.
- Chapter five illustrates the concepts of pH and sorenson's pH scale, apply buffer equation for weak acid or base and its salts, ability to calculate buffer capacity, concept of calculating tonicity and its importance in pharmaceuticals.

Ayesha Sultana

(Contents)

- Solubility of Drugs
- States of Matter and Properties of Matter & Physicochemical Properties of Drug Molecules
- Surface and Interfacial Phenomenon
- Complexation and Protein Binding
- pH, buffers and Isotonic Solutions

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