

TEXTBOOK OF PHYSICAL PHARMACEUTICS - I

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PREFACE

Physical Pharmaceutics-I is a fundamental subject that forms the scientific foundation for understanding pharmaceutical formulations and dosage form development. It connects the principles of physical chemistry with pharmacy and explains how physicochemical properties influence the design, stability, quality, and performance of pharmaceutical products.

This book has been prepared with the objective of providing clear, simple, and student-friendly study material on important topics of Physical Pharmaceutics-I. The contents have been written in an organized manner to support undergraduate pharmacy students in understanding core concepts such as solubility, distribution phenomena, interfacial phenomena, colloidal dispersions, coarse dispersions, rheology, micromeritics, particle size analysis, powder flow properties, buffers, pH, and related pharmaceutical applications.

Special attention has been given to presenting the subject in a simplified and systematic way. Wherever necessary, tables, flow charts, equations, examples, and diagrams have been included to make the concepts easier to understand and remember. The language has been kept simple so that students can use this book for classroom learning, examination preparation, and practical application in formulation studies.

Physical Pharmaceutics-I is not only important from an academic point of view but also has great relevance in pharmaceutical research, product development, quality control, and industrial pharmacy. A clear understanding of this subject helps students build a strong base for advanced subjects such as Pharmaceutics, Biopharmaceutics, Pharmaceutical Technology, Novel Drug Delivery Systems, and Industrial Pharmacy.

I hope this book will serve as a useful learning resource for students, teachers, and all learners of pharmacy. Suggestions for further improvement are always welcome and will be gratefully acknowledged.

 Ritu Malik

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I express my sincere gratitude to all those who have directly or indirectly contributed to the preparation of this book, **Physical Pharmaceutics-I**.

First and foremost, I am thankful to the Almighty for giving me the strength, patience, and determination to complete this work. I also express my heartfelt thanks to my teachers, mentors, and academic guides, whose valuable knowledge, guidance, and encouragement have helped me understand the importance of this subject and present it in a meaningful manner.

I am deeply grateful to the authors, researchers, and academicians whose published works and contributions in the field of physical pharmaceutics have provided a strong foundation for preparing this book. Their efforts have greatly enriched the subject and continue to guide students and professionals in pharmacy education.

I also extend my sincere thanks to my colleagues, friends, and students for their constant support, valuable suggestions, and motivation during the preparation of this book. Their feedback helped in making the content more clear, organized, and useful for learners.

I would like to acknowledge the support of my institution and all faculty members who encouraged academic writing and contributed to the development of a positive learning environment.

Finally, I express my deepest gratitude to my family for their patience, understanding, moral support, and encouragement throughout the preparation of this book. Their support has been a constant source of inspiration.

I sincerely hope that this book will be helpful to pharmacy students in strengthening their understanding of Physical Pharmaceutics-I and applying these concepts in their academic and professional journey.

 *Ritu Malik*

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