

First Edition

INTRODUCTION TO BIOSTATISTIC AND RESEARCH METHODOLOGY

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Dr. J. Naveena Lavanya Latha
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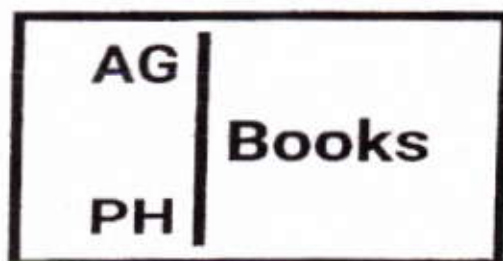
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TABLE OF CONTENT

CHAPTER-1: Data Collection	1
1.1. Methods of Data Collection – Quantitative and Qualitative.....	1
1.2. Quantitative Methods.....	6
1.3. Questionnaire/interview schedule design and construction	19
1.4. Different Measures.....	28
CHAPTER-2: Qualitative Method	47
2.1. Walk-through and observation (participatory and non-participatory).....	47
2.2. Social mapping	55
2.3. Key informant interview.....	59
2.4. In-depth interviews.....	66
2.5. Focus group discussion	70
2.6. Content Analysis.....	74
2.7. Free Listing.....	80

About The Book



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Study on Formulation and *In-vitro* Characterization of Floating Microspheres of Lamivudine

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DOI: 10.9734/bpi/cops/v9/4640C

ABSTRACT

The current study was concerned with the formulation and in vitro evaluation of floating microspheres of lamivudine by inclusion of different concentrations of HPMC K 100M, to increase the gastric residence time of lamivudine and reduced dosage frequency. Floating drug delivery system is one of the methods to increase the gastric residence time. Preformulation studies performed to confirm the purity of drug and to find the drug excipient interactions with FTIR studies. The ionotropic gelation process was used to create the gastro retentive floating microspheres. For SEM analysis, in-vitro buoyancy studies, and in-vitro dissolving studies, the produced microspheres were assessed. By using FTIR and DSC analysis, the compatibility of the medicine and excipient was verified. According to in-vitro drug release studies, formulation F5, which contains HPMC K100M as a release retardant polymer at a concentration of 1:2 to the drug, was able to sustain drug release for up to 14 hours. The Korsmeyer equation and

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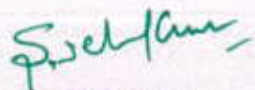
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3 Carbon-based materials as a promising route for water treatment	63
Manoj Tripathi, Avita Agarwa, Mukul Singh and Nabisab Mujawar Mubarak	
3.1 Introduction	63
3.2 Water pollutant.....	66
3.3 Health issues with wastewater.....	69
3.4 Techniques for the removal of pollutants from water	69
3.5 Role of carbon-based materials in pollutant removal and water remediation	79
3.6 Conclusions	89
References	91
4 Fabrication of carbon-based nanomaterials for wastewater treatment.....	97
Sumalatha Jorepalli, Viswadevarayalu Annavamam, Ramamanohar Reddy Nagi Reddy, Vijaya Kumar Naidu Boya, Janardhan Reddy Koduru and Adinarayana Reddy Somala	
4.1 Introduction	97
4.2 Carbon-based nanomaterials	101
4.3 Molecular interaction and sorption properties of carbonaceous materials.....	109
4.4 Nanocarbonaceous compounds as sorbents.....	110
4.5 Carbon nanocomposites' photocatalytic activity.....	113
4.6 Directions for future research.....	117
4.7 Conclusion	118
References	119
5 Preparation of a nanocomposite material based on graphene oxide and green biopolymers as an effective adsorbent for removing various pollutants from water	131
Irina V. Burakova, E.S. Mkrtchyan, Alexander E. Burakov, O.A. Ananyeva, A.E. Memetova, T.P. Dyachkova and A.G. Tkachev	
5.1 Introduction	131
5.2 Experimental part.....	133

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Fabrication of carbon-based nanomaterials for wastewater treatment

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4.1 Introduction

In all spheres of livelihood, the 21st century has seen notable advancements in terms of urbanization, industrialization, and digitalization. On the one hand, these innovations unquestionably raise living standards for individuals everywhere, but they may also negatively affect the ecosystem at large [1,2]. The most horrifying effect of this development is the problem of inadequate access to clean, safe, and inexpensive water, as water is a basic requirement for all kinds of life on Earth. The continuous dumping of domestic, commercial, industrial, and agricultural effluents into natural water resources-deplorable activities committed by some people involved in urbanization and industrialization is gradually reducing the supply of fresh water and significantly impairing aquatic life [3–7]. Unusual global climate change, poor water uses habits, and inadequate wastewater treatment systems worsen the situation. The ensuing environmental impact jeopardizes the stability and well-being of



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TABLE OF CONTENTS

I.	Introduction.....	2
II.	Hydrogel Preparation by Chemical Cross-Linking.....	2
	A. Cross-Linking of Polymers.....	2
	B. Copolymerization/ Cross-Linking Reactions.....	6
	1. Reaction Characteristics.....	6
	2. Kinetic Mechanism.....	8
	3. Molecular Weight Distribution.....	9
	4. Gelation.....	11
	5. Vitrification.....	11
III.	Hydrogel Preparation by Radiation.....	12
	A. Effect of Ionizing Radiation on Polymers.....	12
	1. Types of Ionizing Radiation.....	12
	2. Effects of Ionizing Radiation on Macromolecules.....	13
	3. Gas Evolution.....	14
	4. Effect of Oxygen.....	15
	5. Cross-Linking Reaction.....	15
	B. Irradiation of Polymers in Solution.....	17
IV.	Network Structure and Defects.....	19
V.	Semicrystalline Hydrogels.....	20
	References.....	24



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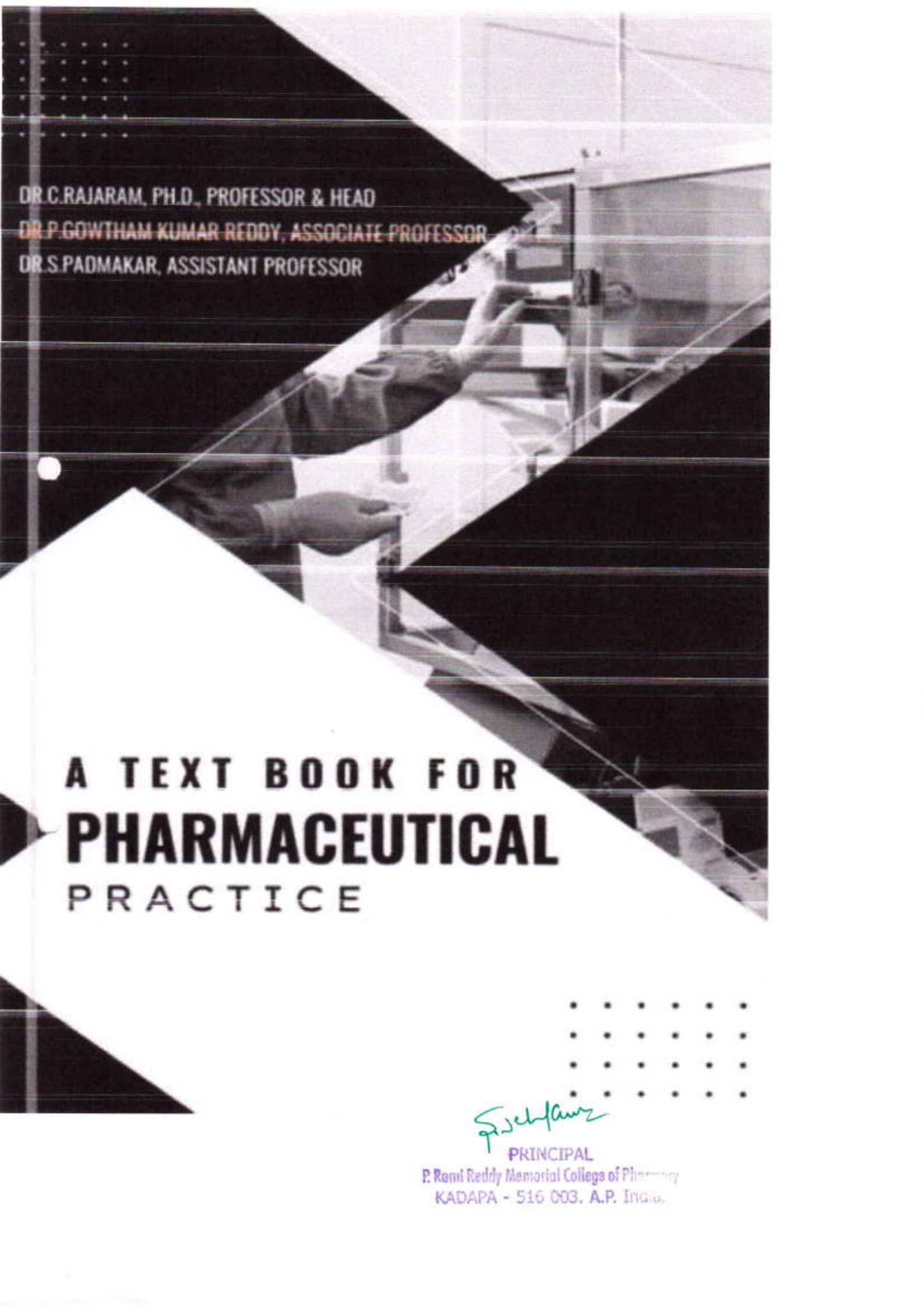
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I.	Introduction.....	2
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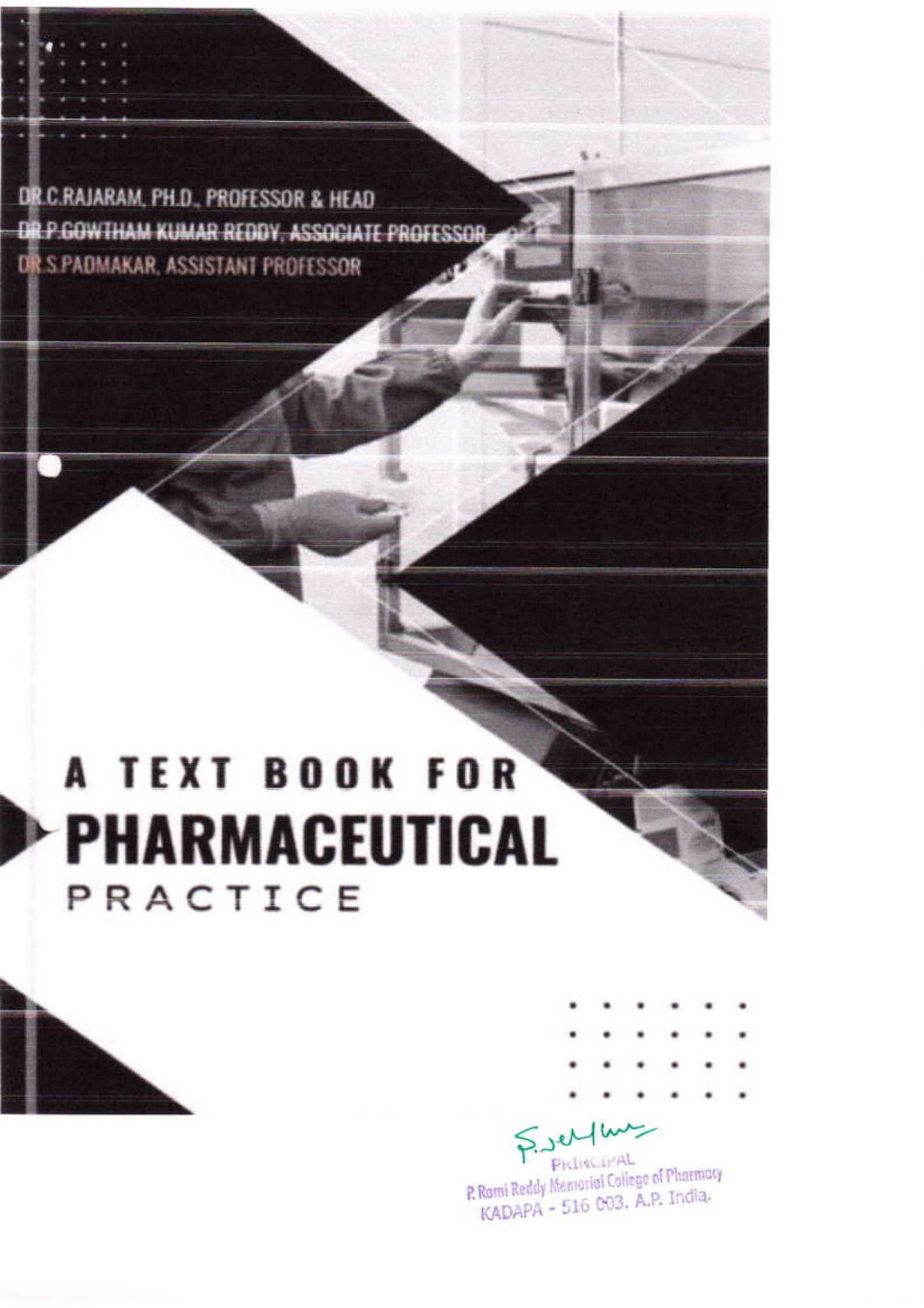
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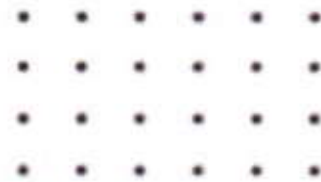
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	3. Gas Evolution.....	14
	4. Effect of Oxygen.....	15
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	B. Irradiation of Polymers in Solution.....	17
IV.	Network Structure and Defects.....	19
V.	Semicrystalline Hydrogels.....	20
	References.....	24


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Contents

1. Control of the quality of analytical methods 1
 - Introduction 1
 - Control of errors in analysis 2
 - Accuracy and precision 5
 - Validation of analytical procedures 7
 - Standard operating procedure (SOP) for the assay of paracetamol tablets 10
 - Compound random errors 11
 - Reporting of results 13
 - Other terms used in the control of analytical procedures 14
 - Basic calculations in pharmaceutical analysis 19
 - Additional problems 24
2. Physical and chemical properties of drug molecules 26
 - Introduction 26
 - Calculation of pH value of aqueous solutions of strong and weak acids and bases 27
 - Acidic and basic strength and pKa 29
 - Henderson-Hasselbalch equation 29
 - Ionisation of drug molecules 31
 - Buffers 33
 - Salt hydrolysis 36
 - Activity, ionic strength and dielectric constant 37
 - Partition coefficient 38
 - Drug stability 41
 - Stereochemistry of drugs 43
 - Measurement of optical rotation 49
 - Profiles of physico-chemical properties of some drug molecules 50
 - Additional problems 57
3. Titrimetric and chemical analysis methods 60
 - Keypoints 60
 - Introduction 61
 - Instrumentation and reagents 61
 - Direct acid/base titrations in the aqueous phase 62
 - Titration of the salts of weak bases in mixed aqueous/non-aqueous media 65
 - Indirect titrations in the aqueous phase 66
 - Non-aqueous titrations 68
 - Argentometric titrations 70
 - Compleximetric titrations 70
 - Redox titrations 71

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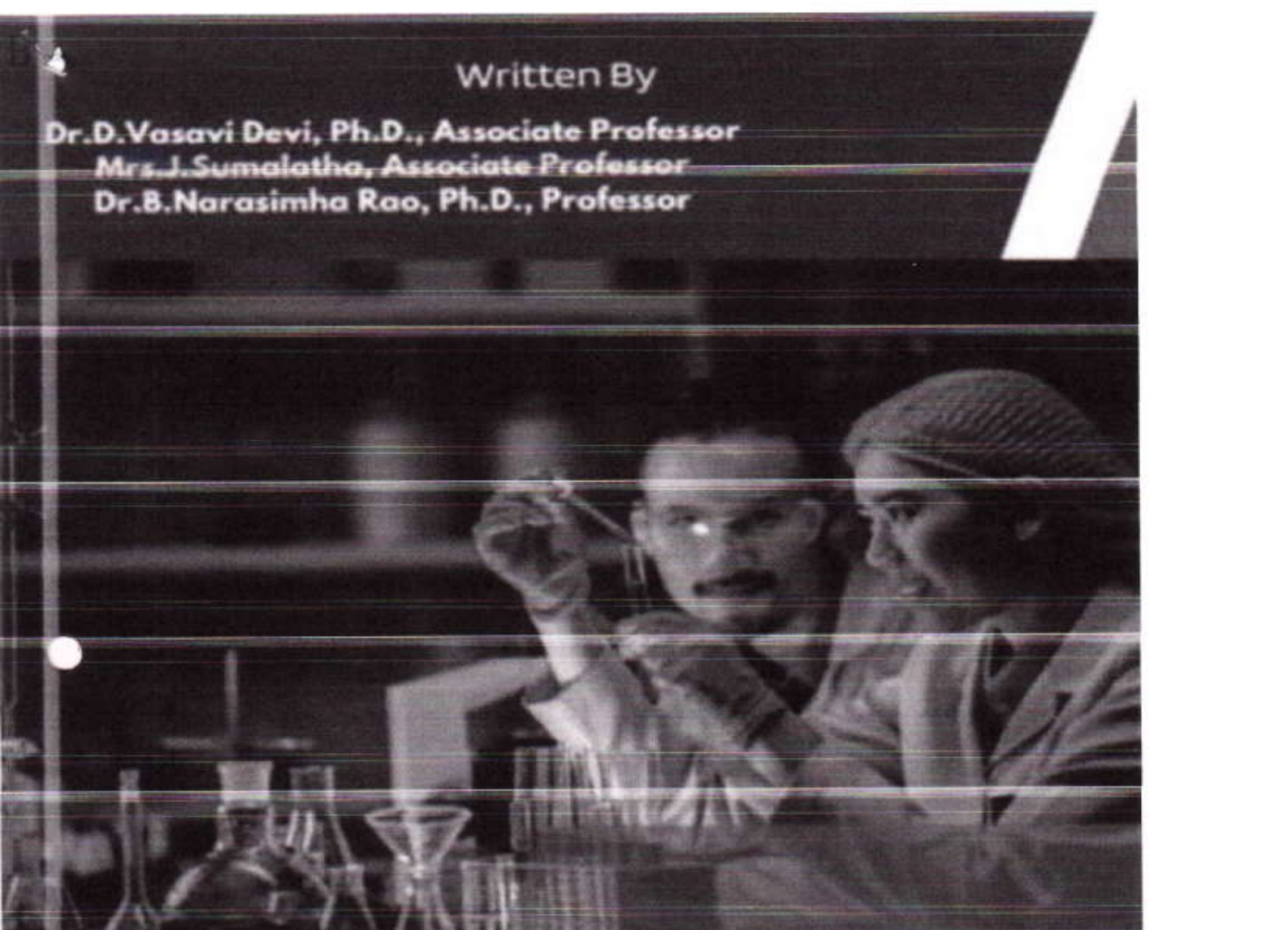


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Contents

1. Control of the quality of analytical methods 1
 - Introduction 1
 - Control of errors in analysis 2
 - Accuracy and precision 5
 - Validation of analytical procedures 7
 - Standard operating procedure (SOP) for the assay of paracetamol tablets 10
 - Compound random errors 11
 - Reporting of results 13
 - Other terms used in the control of analytical procedures 14
 - Basic calculations in pharmaceutical analysis 19
 - Additional problems 24
2. Physical and chemical properties of drug molecules 26
 - Introduction 26
 - Calculation of pH value of aqueous solutions of strong and weak acids and bases 27
 - Acidic and basic strength and pKa 29
 - Henderson-Hasselbalch equation 29
 - Ionisation of drug molecules 31
 - Buffers 33
 - Salt hydrolysis 36
 - Activity, ionic strength and dielectric constant 37
 - Partition coefficient 38
 - Drug stability 41
 - Stereochemistry of drugs 43
 - Measurement of optical rotation 49
 - Profiles of physico-chemical properties of some drug molecules 50
 - Additional problems 57
3. Titrimetric and chemical analysis methods 60
 - Keypoints 60
 - Introduction 61
 - Instrumentation and reagents 61
 - Direct acid/base titrations in the aqueous phase 62
 - Titration of the salts of weak bases in mixed aqueous/non-aqueous media 65
 - Indirect titrations in the aqueous phase 66
 - Non-aqueous titrations 68
 - Argentometric titrations 70
 - Compleximetric titrations 70
 - Redox titrations 71


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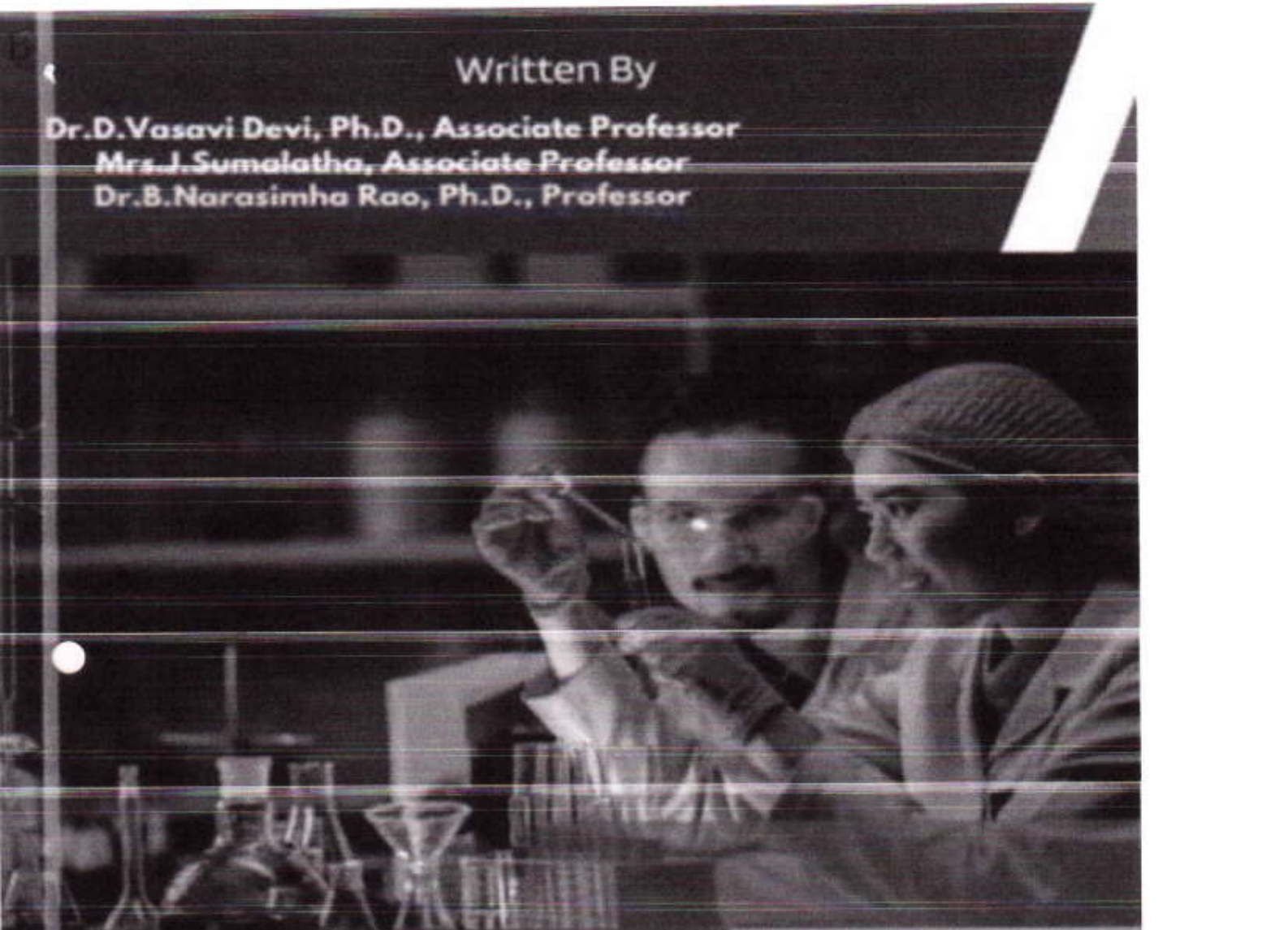
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 - Additional problems 57

3. Titrimetric and chemical analysis methods 60
 - Keypoints 60
 - Introduction 61
 - Instrumentation and reagents 61
 - Direct acid/base titrations in the aqueous phase 62
 - Titration of the salts of weak bases in mixed aqueous/non-aqueous media 65
 - Indirect titrations in the aqueous phase 66
 - Non-aqueous titrations 68
 - Argentometric titrations 70
 - Compleximetric titrations 70
 - Redox titrations 71

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CONTENTS

PREFACE	xiii
SECTION 1 MANUFACTURING SPECIALTIES	1
1.1 Biotechnology-Derived Drug Product Development	3
1.2 Regulatory Considerations in Approval on Follow-On Protein Drug Products	33
1.3 Radiopharmaceutical Manufacturing	59
SECTION 2 ASEPTIC PROCESSING	97
2.1 Sterile Product Manufacturing	99
SECTION 3 FACILITY	137
3.1 From Pilot Plant to Manufacturing: Effect of Scale-Up on Operation of Jacketed Reactors	139
x CONTENTS	ix
3.2 Packaging and Labeling	159
3.3 Clean-Facility Design, Construction, and Maintenance Issues	201
SECTION 4 NORMAL DOSAGE FORMS	233
4.1 Solid Dosage Forms	235
4.2 Semisolid Dosages: Ointments, Creams, and Gels	267
4.3 Liquid Dosage Forms	313

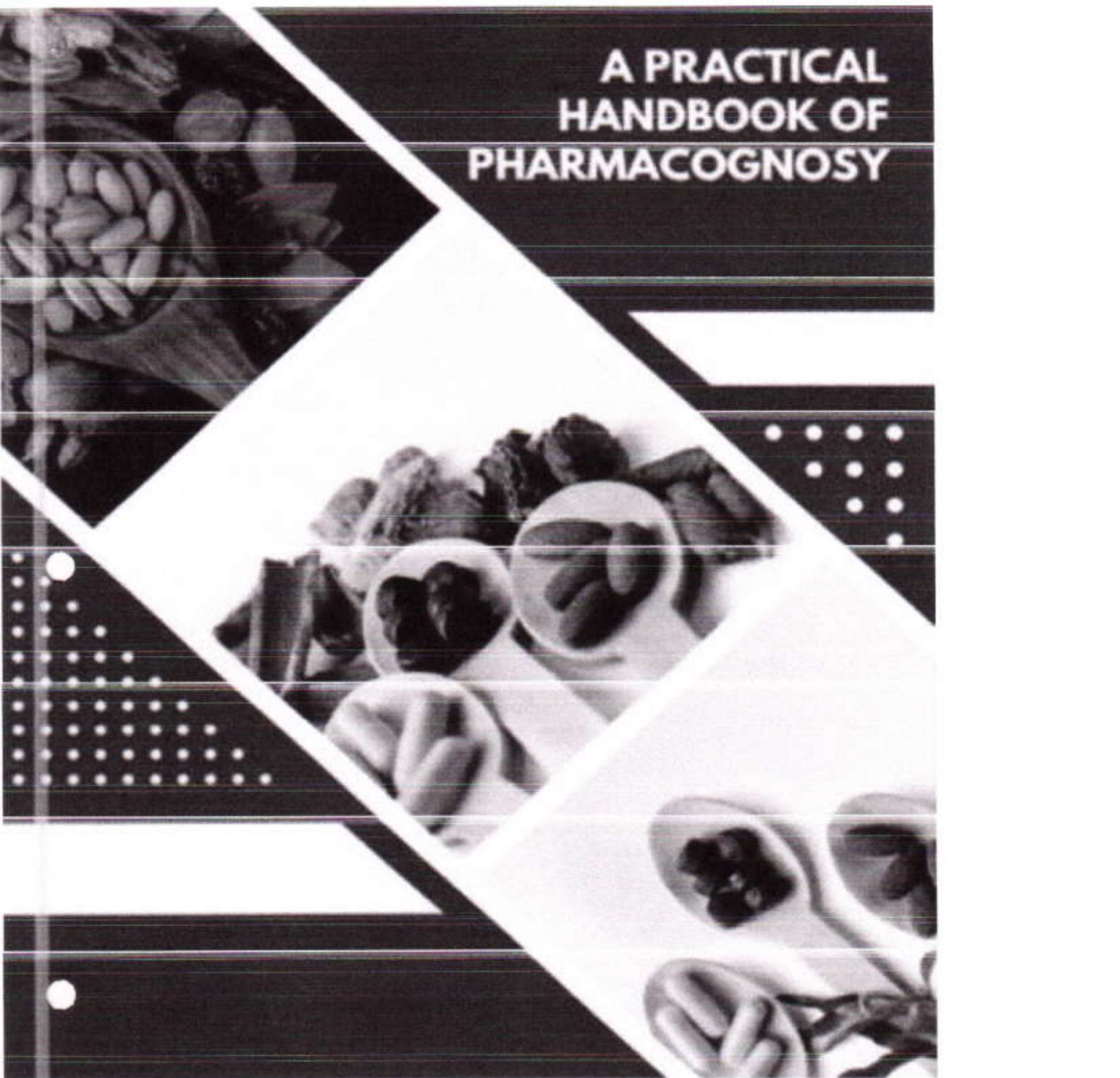

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PREFACE	xiii
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3.2 Packaging and Labeling	159
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4.3 Liquid Dosage Forms	313

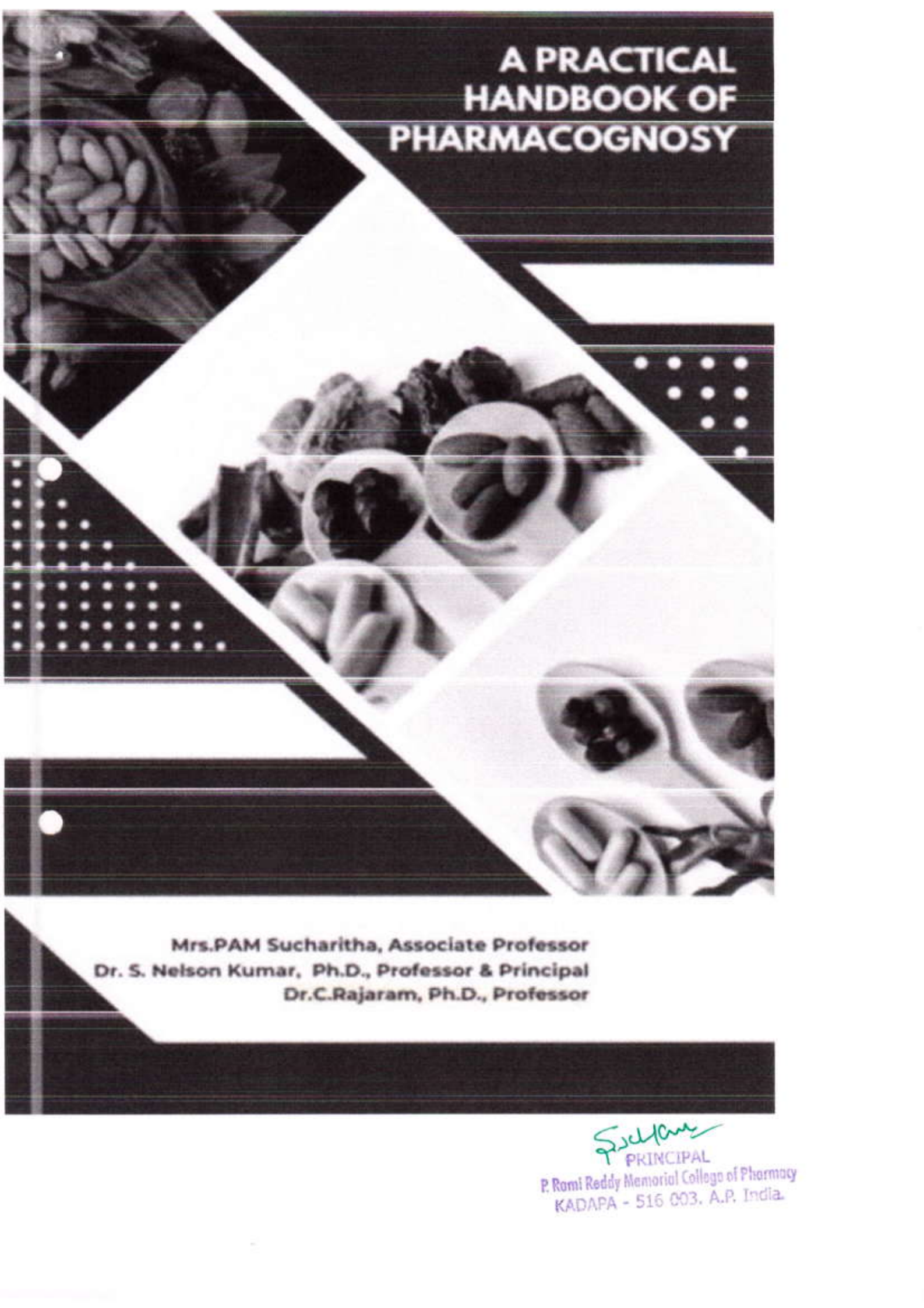
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CONTENTS

PREFACE	xiii
SECTION 1 MANUFACTURING SPECIALTIES	1
1.1 Biotechnology-Derived Drug Product Development	3
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2.1 Sterile Product Manufacturing	99
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3.1 From Pilot Plant to Manufacturing: Effect of Scale-Up on Operation of Jacketed Reactors	139
x CONTENTS	ix
3.2 Packaging and Labeling	159
3.3 Clean-Facility Design, Construction, and Maintenance Issues	201
SECTION 4 NORMAL DOSAGE FORMS	233
4.1 Solid Dosage Forms	235
4.2 Semisolid Dosages: Ointments, Creams, and Gels	267
4.3 Liquid Dosage Forms	313

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CONTENTS

FOREWORD	viii
PREFACE	ix
ACKNOWLEDGEMENTS	x
PART I GENERAL PRINCIPLES	1
1 Introduction to therapeutics	3
2 Mechanisms of drug action (pharmacodynamics)	6
3 Pharmacokinetics	11
4 Drug absorption and routes of administration	17
5 Drug metabolism	24
6 Renal excretion of drugs	31
7 Effects of disease on drug disposition	34
8 Therapeutic drug monitoring	41
9 Drugs in pregnancy	45
10 Drugs in infants and children	52
11 Drugs in the elderly	56
12 Adverse drug reactions	62
13 Drug interactions	71
14 Pharmacogenetics	79
15 Introduction of new drugs and clinical trials	86
16 Cell-based and recombinant DNA therapies	92
17 Alternative medicines: herbals and nutraceuticals	97
PART II THE NERVOUS SYSTEM	103
18 Hypnotics and anxiolytics	105
19 Schizophrenia and behavioural emergencies	110
20 Mood disorders	116
21 Movement disorders and degenerative CNS disease	124
22 Anti-epileptics	133
23 Migraine	142
24 Anaesthetics and muscle relaxants	145
25 Analgesics and the control of pain	155
PART III THE MUSCULOSKELETAL SYSTEM	165
26 Anti-inflammatory drugs and the treatment of arthritis	167
PART IV THE CARDIOVASCULAR SYSTEM	175

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CONTENTS

FOREWORD	viii
PREFACE	ix
ACKNOWLEDGEMENTS	x
PART I GENERAL PRINCIPLES	1
1 Introduction to therapeutics	3
2 Mechanisms of drug action (pharmacodynamics)	6
3 Pharmacokinetics	11
4 Drug absorption and routes of administration	17
5 Drug metabolism	24
6 Renal excretion of drugs	31
7 Effects of disease on drug disposition	34
8 Therapeutic drug monitoring	41
9 Drugs in pregnancy	45
10 Drugs in infants and children	52
11 Drugs in the elderly	56
12 Adverse drug reactions	62
13 Drug interactions	71
14 Pharmacogenetics	79
15 Introduction of new drugs and clinical trials	86
16 Cell-based and recombinant DNA therapies	92
17 Alternative medicines: herbals and nutraceuticals	97
PART II THE NERVOUS SYSTEM	103
18 Hypnotics and anxiolytics	105
19 Schizophrenia and behavioural emergencies	110
20 Mood disorders	116
21 Movement disorders and degenerative CNS disease	124
22 Anti-epileptics	133
23 Migraine	142
24 Anaesthetics and muscle relaxants	145
25 Analgesics and the control of pain	155
PART III THE MUSCULOSKELETAL SYSTEM	165
26 Anti-inflammatory drugs and the treatment of arthritis	167
PART IV THE CARDIOVASCULAR SYSTEM	175

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CONTENTS

FOREWORD	viii
PREFACE	ix
ACKNOWLEDGEMENTS	x
PART I GENERAL PRINCIPLES	1
1 Introduction to therapeutics	3
2 Mechanisms of drug action (pharmacodynamics)	6
3 Pharmacokinetics	11
4 Drug absorption and routes of administration	17
5 Drug metabolism	24
6 Renal excretion of drugs	31
7 Effects of disease on drug disposition	34
8 Therapeutic drug monitoring	41
9 Drugs in pregnancy	45
10 Drugs in infants and children	52
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12 Adverse drug reactions	62
13 Drug interactions	71
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15 Introduction of new drugs and clinical trials	86
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PART II THE NERVOUS SYSTEM	103
18 Hypnotics and anxiolytics	105
19 Schizophrenia and behavioural emergencies	110
20 Mood disorders	116
21 Movement disorders and degenerative CNS disease	124
22 Anti-epileptics	133
23 Migraine	142
24 Anaesthetics and muscle relaxants	145
25 Analgesics and the control of pain	155
PART III THE MUSCULOSKELETAL SYSTEM	165
26 Anti-inflammatory drugs and the treatment of arthritis	167
PART IV THE CARDIOVASCULAR SYSTEM	175

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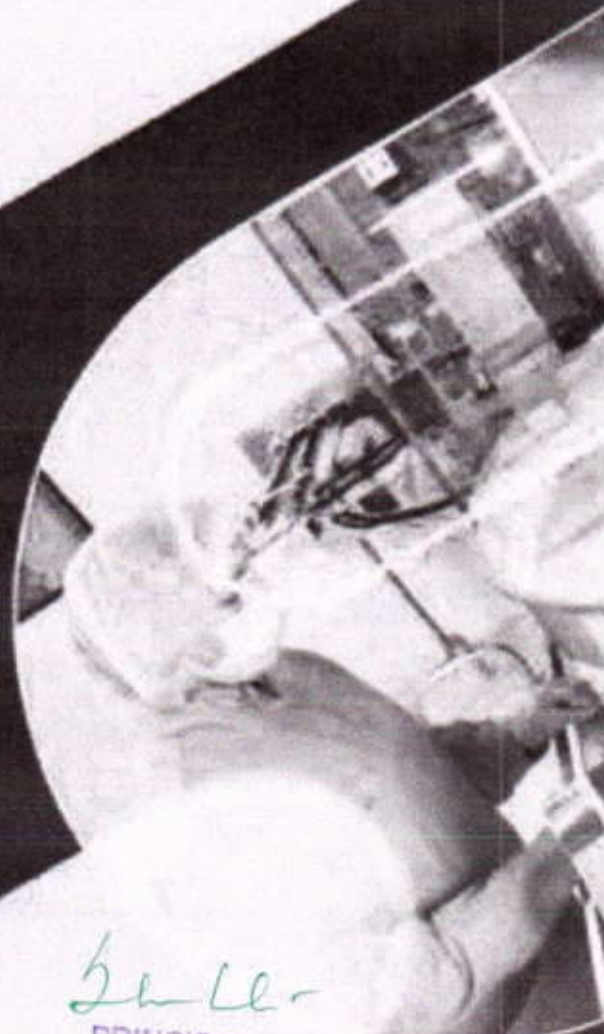
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Contents

1. Solubility of Drugs	1.1 - 1.32
1.1 Introduction	1.1
1.2 Solubility Expressions	1.2
1.3 Mechanisms of Solute Solvent Interactions	1.5
1.4 Ideal Solubility Parameters	1.6
1.5 Solvation	1.7
1.6 Association	1.8
1.7 Quantitative Approach to the Factors Influencing Solubility of Drugs	1.9
1.8 Diffusion Principles in Biological Systems	1.11
1.9 Solubility of Gas in Liquids	1.12
1.10 Solubility of Liquids in Liquids	1.14
1.10.1 Binary Solutions	1.14
1.10.2 Ideal Solutions	1.15
1.11 Raoult's Law	1.17
1.12 Real Solutions	1.21
1.13 Partially Miscible Liquids	1.21
1.14 Critical Solution temperature and its Applications	1.22
1.15 Distribution Law	1.26
1.15.1 Limitations of Distribution Law	1.29
1.15.2 Applications of Distribution Law	1.29
• Exercise	1.30
2. States and Properties of Matter and Physicochemical Properties of Drug Molecules	2.1 - 2.78
2.1 States of Matter and Properties of Matter	2.1
2.1.1 States of Matter	2.1
2.1.2 Changes in the State of Matter	2.5
2.1.3 Latent Heat	2.6
2.1.4 Vapour Pressure	2.7
2.1.5 Sublimation	2.11
2.1.6 Critical Point	2.12
2.1.7 Eutectic Mixtures	2.13
2.1.8 Gases	2.14
2.1.9 Aerosols	2.22

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Contents

1. Solubility of Drugs	1.1 - 1.32
1.1 Introduction	1.1
1.2 Solubility Expressions	1.2
1.3 Mechanisms of Solute Solvent Interactions	1.5
1.4 Ideal Solubility Parameters	1.6
1.5 Solvation	1.7
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1.7 Quantitative Approach to the Factors Influencing Solubility of Drugs	1.9
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1.9 Solubility of Gas in Liquids	1.12
1.10 Solubility of Liquids in Liquids	1.14
1.10.1 Binary Solutions	1.14
1.10.2 Ideal Solutions	1.15
1.11 Raoult's Law	1.17
1.12 Real Solutions	1.21
1.13 Partially Miscible Liquids	1.21
1.14 Critical Solution temperature and its Applications	1.22
1.15 Distribution Law	1.26
1.15.1 Limitations of Distribution Law	1.29
1.15.2 Applications of Distribution Law	1.29
• Exercise	1.30
2. States and Properties of Matter and Physicochemical Properties of Drug Molecules	2.1 - 2.78
2.1 States of Matter and Properties of Matter	2.1
2.1.1 States of Matter	2.1
2.1.2 Changes in the State of Matter	2.5
2.1.3 Latent Heat	2.6
2.1.4 Vapour Pressure	2.7
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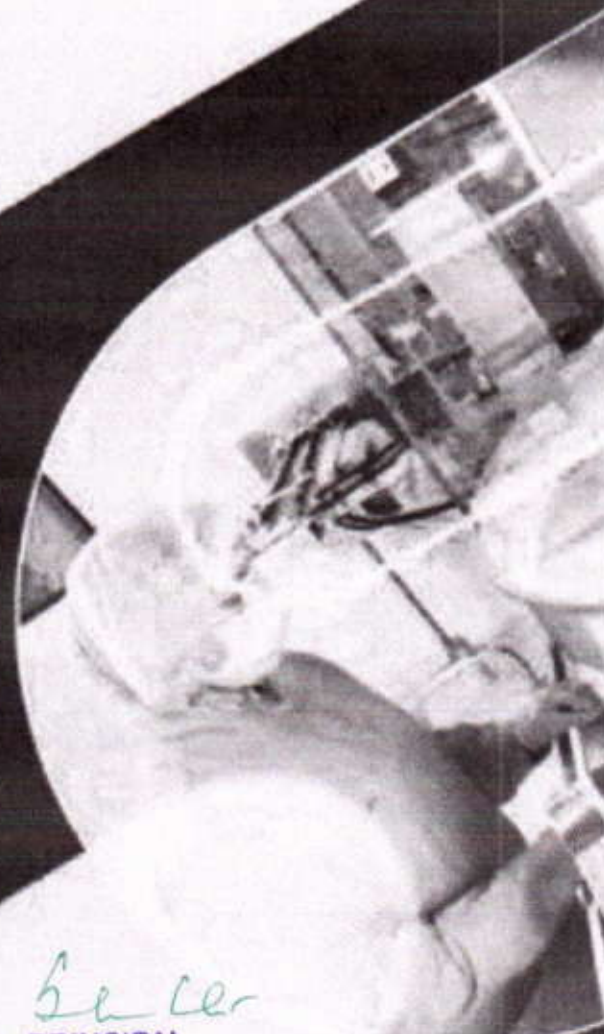
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Contents

1. Solubility of Drugs	1.1 - 1.32
1.1 Introduction	1.1
1.2 Solubility Expressions	1.2
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1.10.2 Ideal Solutions	1.15
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