

## TABLE OF CONTENTS

Foreword	v
The editor	vii
The contributors	ix
Contents	xi
Dedication	xxvii
Chapter 1	1
INTRODUCTION	1
I. LABORATORY SAFETY AS A COOPERATIVE RESPONSIBILITY	6
Chapter 2	23
EMERGENCIES	23
Chapter 3	69
LABORATORY FACILITIES – DESIGN AND EQUIPMENT	69
I. LABORATORY DESIGN	69
II. FIXED EQUIPMENT AND FURNITURE	128
III. CHEMICAL STORAGE ROOMS	186
IV. MOVABLE EQUIPMENT	189
V. ANIMAL LABORATORIES – SPECIAL REQUIREMENTS	195
Chapter 4	199
LABORATORY OPERATIONS	199
I. GENERAL CONSIDERATIONS	199
II. OSHA LABORATORY SAFETY STANDARD	201
III. OPERATIONAL PLANNING	209
IV. PURCHASING OF ANIMALS	241
V. STORAGE	242
VI. HANDLING AND USE OF CHEMICALS : LABORATORY OPERATIONS	271
VII. HAZARD AWARENESS (RIGHT-TO-KNOW)	342
VIII. HEALTH EFFECTS	352
IX. SPILLS AND EMERGENCIES	422
X. CHEMICAL WASTES	434
XI. LABORATORY CLOSEOUT PROCEDURES	490

Chapter 5	493
NONCHEMICAL LABORATORIES	493
I. INTRODUCTION	493
II. RADIOISOTOPE LABORATORIES	493
III. X-RAY FACILITIES	574
IV. NONIONIZING RADIATION	589
V. LASER LABORATORIES	592
VI. MICROBIOLOGICAL AND BIOMEDICAL LABORATORIES	603
VII. RECOMBINANT DNA LABORATORIES	646
VIII. RESEARCH ANIMAL CARE AND HANDLING	697
 Chapter 6	 703
PERSONAL PROTECTIVE EQUIPMENT	703
I. INTRODUCTION	703
II. RESPIRATORY PROTECTION	703
III. EYE PROTECTION	736
IV. MATERIALS FOR PROTECTIVE APPAREL	738
V. HEARING PROTECTION	745
VI. FIRST AID KITS	746
VII. OTHER PERSONAL PROTECTIVE EQUIPMENT	746
 INDEX	 751