TABLE OF CONTENTS

SECTION I - ANATOMY, PHYSIOLOGY, AND PHARMACOLOGY

Chapter 1

Anatomy, Physiology, and Effects of Pain George J. DeMarco and Peter J. Pascoe

Chapter 2

Pharmacology of Injectable Anesthetics, Sedatives, and Tranquilizers Robert E. Meyer and Richard E. Fish

Chapter 3

Pharmacology of Inhalation Anesthetics David B. Brunson

Chapter 4

Pharmacology of Analgesics

James E. Heavner and Dale M. Cooper

SECTION II - MONITORING AND EQUIPMENT

Chapter 5

Anesthesia Delivery Systems George A. Vogler

Chapter 6

Monitoring of Anesthesia Jennifer C. Smith and Peggy J. Danneman

Chapter 7

Waste Anesthetic Gas Safety Jennifer C. Smith

Chapter 8

Strategies for Assessing and Minimizing Pain Alicia Z. Karas, Peggy J. Danneman, and Joan Cadillac

Chapter 9

Post-procedural Care of Commonly Utilized Research Animal Subjects Victoria A. Hampshire and Judith A. Davis

SECTION III – PRACTICAL ANESTHESIA AND ANALGESIA OF TRADITIONAL LABORATORY ANIMAL SPECIES

Chapter 10

Anesthesia and Analgesia in Rodents

Diane Gaertner et al. [Diane J. Gaertner, Margaret Batchelder, F. Claire Hankenson and Troy M. Hallman]

Chapter 11

Anesthesia and Analgesia in Rabbits Neil S. Lipman, Robert P. Marini, and Paula A. Flecknell

Chapter 12

Anesthesia and Analgesia in Nonhuman Primates Sulli J. Popilskis, Donald R. Lee and David B. Elmore

Chapter 13

Anesthesia and Analgesia in Dogs and Cats Elizabeth Armitage-Chan

Chapter 14

Anesthesia and Analgesia of Ruminants Alexander Valverde and Thomas J. Doherty

Chapter 15

Anesthesia and Analgesia in Swine Alison C. Smith and M. Michael Swindle

SECTION IV - PRACTICAL ANESTHESIA AND ANALGESIA OF NON-TRADITIONAL LABORATORY ANIMAL SPECIES

Chapter 16

Anesthesia and Analgesia in Ferrets Jeff Ko and Robert P. Marini

Chapter 17

Anesthesia and Analgesia in Other Mammals Jeff Wyatt

Chapter 18

Anesthesia and Analgesia in Birds John W. Ludders

Chapter 19

Anesthesia and Analgesia in Reptiles Dorcas P. O'Rourke and Audrey L. Jenkins

Chapter 20

Anesthesia and Analgesia in Amphibians Dorcas P. O'Rourke and Audrey L. Jenkins

Chapter 21

Anesthesia and Restraint of Laboratory Fishes Michael Stoskopf and Lysa Pam Posner

Chapter 22

Anesthesia and Analgesia of Invertebrates Cornelia Gunkel and Gregory A. Lewbart

SECTION V - SPECIAL TOPICS IN ANESTHESIA AND ANALGESIA OF LABORATORY ANIMALS

Chapter 23

Pain Testing in the Laboratory Mouse Dale J. Langford and Jeffrey S. Mogil

Chapter 24

Ethical Issues in Anesthesia and Analgesia in Laboratory Animals Larry Carbone and Nelson Garnett

Chapter 25

Regulatory Issues Lynn C. Anderson and Laura Conour

Chapter 26

Management of Chronic Pain George DeMarco

Chapter 27

Anesthesia and Analgesia in the Fetus and Neonate Joanna C. Murrell, David J. Mellor and Craig Johnson

Chapter 28

Novel Delivery Systems for Analgesic Drugs in Laboratory Animals Lisa Krugner-Higby, Lesley J. Smith, and Timothy D. Heath

Chapter 29

Non Pharmacologic Pain Control Sara Savage

Chapter 30

Anesthetic Considerations for In Vivo Imaging Studies Anthony Nicholson and Brenda Klaunberg

Index.