
This book is intended for students of biochemistry and designed to be used in conjunction with a traditional biochemistry textbook rather than to serve as a stand-alone text. The motivation for preparing this book came from the author's experience. As a student, he found that traditional textbooks, although comprehensive in their content, too often failed to identify core concepts and relationships. Without this framework, the undergraduate student dutifully learns facts, but does not integrate them into a relational framework. This book is designed to help set up that framework and, according to the author, to help make the learning of this subject fun.

The 15 chapters are devoted to classic areas of biochemistry and focus mainly on structure, synthesis, and metabolism (e.g., sugars, amino acids, proteins, lipids, nucleotides, DNA, and RNA) as well as the nature of the complex metabolic pathways (tricarboxylic acid cycle, oxidative phosphorylation, photosynthesis, diet, and energy metabolism) that are essential for life.

The chapters are designed to lead the student through the learning process; each opens with a bulleted list of concepts to be learned. Major points are concisely summarized in boxes set off from the text. There are questions and answers that illustrate concepts with concrete examples and an index that directs students to areas of text dealing with the topic. Unfortunately, there is no glossary of terms. Although there are sections devoted to nomenclature in each chapter, I found that for many terms, the index did not lead me to a page where that term was clearly defined.

Although the style of writing is informal and easy to read, the layout and presentation are not particularly appealing. The text is in a two-column format and uses only black, white, and gray tones. The use of color would enhance appeal and provide visual cues to focus attention to the side chains of structures or the pathways of interest far better than a black circle to draw attention to an area of interest. The text, chemical structures, and boxes containing major points are crowded together in a way that draws the eye from place to place with no sense of order or priority. The use of sidebars and grouping of sections of text and illustrations would have enhanced the readability and made pages more attractive.

The premise of this book, to help students develop a framework for biochemistry above and beyond what is gleaned from their standard textbooks, is a valuable one, but I question whether this book, or any book, is the way to do it. I cannot help but wonder why this type of supplemental material was not developed on a CD-ROM. The use of color and animation would serve to enhance appeal. Three-dimensional structures and animated reaction pathways could be used. Sound could be provided, including a person explaining the concept to provide a welcome alternative to reading of text. The use of hypertext to link terms to a glossary, and options to query the database about a term, would be far superior to a traditional index.

So although the concept of a supplemental source of information that students could use to enhance their learning of biochemistry is good, this is a disappointing attempt to achieve that goal.

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What a great book! What a tour de force! This book contains virtually every clinical laboratory test in use and the values associated with various disease states. The information is presented in two complementary ways. The first volume is categorized by laboratory tests listed in alphabetical order, with values in various diseased states listed below each relevant laboratory test. The second volume is categorized by disease state (in ascending ICD-9 code order) with associated laboratory values listed beneath each relevant disease state.

This book is amazingly current with the test menu, including many tests that have not yet made it into routine clinical laboratory testing (e.g., interleukin, soluble interleukin receptors, ICAM-1, cytokines, and various solid tumor markers). A really nice feature is the comprehensive and quite impressive reference list citing the primary publication for each fact listed; there are 5885 references cited in this latest edition!

I found this book extraordinarily useful in the daily operations of my clinical laboratory. It is one of the first books I reach for when residents come in for clinical advice about a newly encountered test. The information contained within readily allows me to assess clinical sensitivity, clinical specificity, and overall clinical utility of the test in question. I also use it whenever an esoteric test is requested in conjunction with a disease state for which I was unaware that an association existed. Furthermore, I use it whenever an unexpected laboratory result cited in this latest edition!

The only disadvantage is that both volumes are paperback, and each volume is two inches thick; I worry about the long-term survival of these two paperback volumes that will undoubtedly be heavily used. I also worry about wrist and arm injuries related to the weight of each volume.

I would highly recommend this book for practicing laboratory medicine physicians, pathologists in private practice, and pathology and laboratory medicine residents. It is also quite useful to have as a general reference text in a clinical laboratory.


The past decade has been witness to significant advances in the area of DNA analysis with capillary electrophoresis (CE). This two-volume set provides a much-needed, authoritative and up-to-date (through the early months of 2001) compilation of work in this rapidly maturing field. These volumes comprehensively and accurately present CE technology and techniques with an emphasis on providing an understanding of the theory and instrumentation (Vol. 1), as well as detailed examples of successful analytical protocols (both volumes). Included are discussions of CE methodology for the analyses of genetic variation and detection of mutation, DNA sizing and sequencing, genotyping, the study of interactions between DNA and other molecules, and separations of nucleotides, oligonucleotides, and metabolites. Chapters on the use of microchip and mass spectrometric detection are also included.

Each volume is presented in six parts, with each part addressing a general goal and/or application. Individual chapters have been written primarily by practicing experts in the field. The methods section of each chapter contains numbered step-by-step experimental protocols. Although this format is somewhat distracting in the more theory-oriented chapters in Vol. 1, it is quite useful in most other chapters.

The principles of CE for the analysis of DNA are presented in Vol. 1. An overview of the instrumentation used is presented along with appropriate references to the primary literature. Practical considerations such as the selection of separation buffers, additives, dyes, capillary coatings, and sieving matrices are thoroughly discussed. Examples of separations of small-molecule nucleic acids, oligonucleotides, and DNA fragments up to 1 kbp are considered. Both sizing and sequencing of PCR products are described, and discussions of the factors that affect resolution and analysis time are presented. Discussion of the fabrication and use of microchip devices is also included.

Although numerous experimental protocols can be found in Vol. 1, it is clear that the intent is to communicate the underlying theory and capability of CE for separations. Vol. 1 should be of interest to the novice as well as the expert.

In Vol. 2, each of the 31 chapters presents specific examples of the use of CE. Groups of chapters in Vol. 2 center on the following: (a) high-throughput analysis of linear DNAs; (b) detection of single nucleotide polymorphisms; (c) genotyping; (d) analysis of RNA and gene expression; (e) conditions for rapid DNA sequencing; and (f) analysis of DNA-protein and DNA-ligand interactions. The chapters in Vol. 2 are generally shorter and more focused than those in Vol. 1, but background and appropriate references to the literature are provided. It appears that Vol. 2 is meant to be a companion volume, but it should also prove useful as a stand-alone text for the CE practitioner.

There is a bit of overlap in coverage from chapter to chapter and between the two volumes, and the quality of individual chapters varies. Nonetheless, these two volumes of the Methods in Molecular Biology series offer a representative and needed overview of the current theory and practice of CE of nucleic acids. These texts should prove very useful to both active investigators in this area and those seeking to learn more about the use and capability of CE.

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This book serves as a practical guide for professionals involved with health risk assessment of exposure to industrial chemicals. It discusses nearly 137 chemicals and chemical classifications and serves as a major resource for interpreting biological measurements in workers exposed to these agents. This third edition is more comprehensive than the first edition of 1983; it includes 14 additional chemicals plus a section on the metabolic fate of chemicals. Its comprehensiveness can be attributed both to the rapidly growing field of biological monitoring and to the authors’ diligence in keeping abreast of the field. Threshold adverse effect concentrations for the chemicals and the various methods used for biomonitoring have also been updated.

This book comprises an introduction, two chapters on the chemical classifications, and a final chapter that summarizes, in a tabular format, the chemicals, their reference values, and their maximum permissible values. The introduction reviews principles of biomonitoring, various methods available, advantages and limitations of the biological media used for analysis, and the applications of the biomonitoring information. Populations that are susceptible to increased chemical absorption following exposure are discussed as well. Although the reader can be selective about subsequent chapters or individual chem-