
BOOK REVIEW

Fundamentals of Biochemical Calculations, 2nd Edn.

(K. Moorthy, 2008, CRC Press, Taylor & Francis Group, Boca Raton, FL, 179 p., \$35.96)

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This rather small book will definitely be useful for a wide audience of specialists working in biochemistry and related areas.

The book consists of 14 chapters, supplement, a list of recommended literature, bibliography, and the alphabetical index.

Chapter 1 is an introduction, in which the author introduces various sections of this book, explains logic of presentation of material in it, and also underlines importance of biochemical calculations in experimental studies.

Chapter 2 characterizes units of volume, concentration, mass, and other parameters employed in biochemistry.

Chapter 3 deals with methods of preparation of solutions; it also describes methods used for their dilution (this is illustrated by numerous examples as well as problems supplied with answers to the problems).

Chapter 4 contains discussion of such notions as relative molecular masses and problems on stoichiometry.

Chapter 5 characterizes acids, bases, and buffer systems.

Chapter 6 deals with polarimetry and its application for characterization of solutions, particularly solutions of sugars and other optically active compounds.

Chapter 7 contains quantitative parameters employed for enzyme characterization (units of activity, molecular and specific activity, concentration, turnover number, etc.).

Chapter 8 deals with enzyme kinetics. It contains analysis of the main kinetic equations (Michaelis–Menten, Lineweaver–Burk, Eddie–Hofstee), types of inhibition of enzymatic reactions. This chapter also gives examples of typical plots and examples of calculations.

Chapter 9 considers principles of colorimetry and spectrophotometry.

Chapter 10 characterizes methods used for analysis of lipids.

Chapter 11 deals with calculations of concentrations of various compounds in tissues and biological fluids.

Chapter 12 gives examples of practical biochemical calculations using data obtained during various biochemical studies.

Chapter 13 contains examples of calculations during molecular-biological experiments with DNA.

Chapter 14 deals with calculations in pharmacy.

The appendix contains information about units of measurement of length, mass, temperature, pressure, and concentrations.

This book is addressed to students and their university and college teachers specialized in biochemistry. I am confident that this book will become a useful reference book on biochemical calculations for many specialists working in the field of biochemistry.

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