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Plotting the Log of Cell Concentration vs. Time Calculating Generation Time; Plotting Cell Growth Data on a Semilog Graph; Determining Generation Time Directly from a Semilog Plot of Cell Concentration vs. Time; Plotting Cell Density versus OD550 on a Semilog Graph; The Fluctuation Test; Fluctuation Test Example; Variance; Measuring Mutation Rate; Measuring Cell Concentration on a Hemocytometer; Chapter 4. Working with Bacteriophage; Introduction; Multiplicity of Infection; Probabilities and Multiplicity of Infection; Measuring Phage Titer; Diluting Bacteriophage; Measuring Burst Size
Chapter 5. Quantitation of Nucleic Acids Quantitation of Nucleic Acids by Ultraviolet Spectroscopy; Determining the Concentration of Double-Stranded DNA; Using Absorbance and an Extinction Coefficient to Calculate Double-Stranded DNA Concentration; Calculating DNA Concentration as a Millimolar (mM) Amount; Determining the Concentration of Single-Stranded DNA Molecules; Oligonucleotide Quantitation; Measuring RNA Concentration; Molecular Weight, Molarity, and Nucleic Acid Length; Estimating DNA Concentration on an Ethidium Bromide-Stained Gel
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Sommario/riassunto

Calculations in Molecular Biology and Biotechnology: A Guide to Mathematics in the Laboratory is the first comprehensive guide devoted exclusively to calculations encountered in the genetic engineering laboratory. Mathematics, as a vital component of the successful design and interpretation of basic research, is used daily in laboratory work. This guide, written for students, technicians, and scientists, provides example calculations for the most frequently confronted problems encountered in gene discovery and analysis. The text and sample calculations are written in an easy-to-follow