CHEMICAL MEASUREMENTS in BIOLOGICAL SYSTEMS

KENT K. STEWART RICHARD E. EBEL

Contents

Foreword		ix
Preface		хi
Acknowledg	ments	xv
Chapter 1.	Introduction	1
Chapter 2.	Water, pH, and Buffers	15
Chapter 3.	Ultraviolet and Visible Absorption Spectrophotometry and Photometry	39
Chapter 4.	Detection Reactions (Colorimetric Reactions)	65
Chapter 5.	Enzymes and the Use of Enzymes as Reagents	85
Chapter 6.	Measurement of Enzyme Activities	105
Chapter 7.	Chromatography as a Tool for Measurement of Analytes in Complex Mixtures	121

vii

Chapter 8.	Electrophoresis and Other Electrokinetic Separations	147
Chapter 9.	Enzyme-Linked Immunosorbant Assays	169
Chapter 10.	Assay Quality Control and Data Validation	181
Chapter 11.	Method Selection	191
Appendix 1.	Units	209
Appendix 2.	Statistics for Chemical Analyses in Biological Systems	215
Appendix 3.	Standard Curves and Linear Regression Analysis	225
Appendix 4.	Dilution Tables	239
Index		243