

CONTENT

Chapter 1 Principle of Cross Electrophoresis	
1-1 Introduction	1
1-2 Crossing by the continuous paper electrophoresis	1
1-3 Cross paper electrophoresis	3
Chapter 2 Apparatus and Procedure	
2-1 One-dimensional cross paper electrophoresis	6
2-2 Two-dimensional cross paper electrophoresis	19
2-3 Quantitative measurements by cross electrophoresis	28
Chapter 3 Applications to Immunochemistry	
3-1 Reaction of serum with its homologous antiserum by cross electrophoresis	39
3-2 Reactions of diphtheria toxoid with antiserum	42
3-3 Reaction of snake venom with its antiserum	52
3-4 Other applications of cross electrophoresis to the immunochemical reactions	59
Chapter 4 Reactions of a Specific Protein of Legumes with Various Proteins	
4-1 Reaction concanavalin A with sera of various animals	66
4-2 Reactions of concanavalin A with egg proteins	84
4-3 Reactions of concanavalin A with other proteins	91
Chapter 5 Observations of Serum Protein Fractions by Means of Cross Diagrams	
5-1 Possibility of observing the changes of serum protein fractions by means of cross diagrams of serum against various substances	95
5-2 Cross diagrams of sera in diseases, against concanavalin A	95
5-3 Cross diagrams of sera against hemoglobin	114
5-4 Interactions of various organic substances with serum and tissue proteins	116
Chapter 6 Distribution of Trypsin Inhibitors	
6-1 Trypsin inhibitors	121
6-2 Distribution of trypsin inhibitors in the serum proteins	121
6-3 Distribution of trypsin inhibitors in egg white proteins of various birds	136
Chapter 7 Proof of the Formation of Enzyme-Substrate Complex	
7-1 Mechanism of enzyme action and the formation of enzyme-substrate complex	151
7-2 Proof of the formation of enzyme-substrate complex by means of cross electrophoresis	152
7-3 Complex formation of inactive enzymes with substrate	164
References	173
Author Index	183
Subject Index	190

