

CONTENTS

I.	Introduction and Review of Electro-Analytical Methods	1
	A. Introduction	1
	B. Methods Depending on the Movement of Particles in an Electric Field	3
	C. Methods Depending on Oxidation and Reduction	7
II.	Apparatus	32
	A. General Remarks	32
	B. Essential Equipment	34
	C. Manipulation	44
	D. Resistance in the Circuit	49
	E. Time-Saving Apparatus (Recording Instruments)	50
III.	Fundamentals of Quantitative Analysis	53
	A. Introduction	53
	B. Residual Current	54
	C. Adsorption Current	56
	D. Migration Current	60
	E. Diffusion Current	64
	F. Kinetic Current	74
	G. Catalytic Current	78
IV.	Fundamentals of Qualitative Analysis	81
	A. Introduction	81
	B. Terminology	83
	C. Reversible Reactions	90
	D. Irreversible Reactions	114
V.	Polarometry	118
	A. Polarometric Studies in General	118
	B. Polarometric Studies of Reaction Kinetics	121
	C. Polarometric Titrations	123
VI.	Recent Developments	129
	A. Differential Polarography	129
	B. Derivative Polarography	130
	C. Oscillographic Polarography	134
	D. Polarography with Electrodes other than Dropping Mercury	140

VII. Applications	147
A. Introduction	147
B. Applications in General	148
C. Inorganic Applications	160
D. Organic Applications	166
E. Special Applications	175
VIII. Suggestions for Practical Polarography	178
A. General	178
B. Characterization and Selection of Capillaries for the Dropping Mercury Electrode	182
Appendix	194
General Polarographic References	196
List of Experiments	198
Index	199