Contents

	Preface Selected References	v vii
	SECTION-A : GENERAL INFORMATION	
Chapter 1.	Tools and Techniques of Drug Analysis General; Sampling and Samples; Apparatus; Use of Balances; Methods of weighing; Various methods of Drug Analysis; General Instructions.	1-12
2.	Drug Analysis and Quality Control Drug Analysis; Quality Control; Sources of Impurities; Limit Test for Inorganic Substances; Impurities for organic substances; Quality Control for Alkaloids; Water content.	13-23
SECTI	ON-B : CHEMICAL OR CLASSICAL METHODS OF ANALYS	SIS
Chapter 3.	Acidimetric And Alkalimetric Methods General; pH; Strong Acid Solutions; Weak Base solutions; Salts; Buffer Solutions; Solutions of Polyprotic Acids and their Salts; Acid-Base Indicators; Preparation of Standard solutions; Important Assay Preparations.	27-56
4.	Non-Aqueous Titration Methods General; Acidimetry in Non-aqueous Solvents; Alkalimetry in Non-aqueous Solve	57-62
5.	Oxidation-Reduction Methods General; Titration involving Potassium permanganate; Titrations involving ceric sulphate; Titrations involving ceric sulphate; Titration involving Iodine;	63-74

	Oxidation-reduction involving Bromine; Oxidation-reduction with	
	Potassium iodate.	
6.	Argentimetric And Complexometric Methods	75-82
	Argentimetric Titrations; Complexo-metric Titrations.	
7.	Gravimetric Methods	83-86
	General; Techniques with Inorganic substances; Determination of	
	medicaments in Capsules.	
8.	Miscellaneous Types of Analysis	87-100
	Sodium nitrite Titrations; Fats and Fatty oils; Acid Value; Saponification	
	value; Ester value; Iodine value; Acetyl value; Hydroxyl value; Analysis of	
	Alkaloids; Analysis of volatile oils.	

SECTION-C : GENERAL PHYSICAL METHODS OF ANALYSIS

Chapter	9.	Refractometry	103-107
		General; Theory; Instrumentation Aspects; Calculations.	
10	0.	Polarimetry	108-115
		General; Theory; Instrumentation Aspects; Calculations.	
1	1.	Optical Rotatory Dispersion And Circular Dichroism	116-124
		General; Instrumentation Aspects; Circular Dichroism; Theory;	
		Instrumentation Aspects.	

SECTION-D : ELECTROCHEMICAL METHODS OF ANALYSIS

Chapter 12.	Electroanalytical Methods General; Principles of Electrochemistry; Potentiometric Titrations; Electrode Potentials; Hydrogen Electrode; Calomel Electrode; Silver-Silver Electrode; Liquid Junction; Quinhydrone Electride; Glass Electrode; pH measurements; Potentiometric Titration;	125-135
13. S	Polarography General; Apparatus and method; Electrolysis Process; Current-voltage curves; Concentration Determination; Applications; Instrumentation Aspects; General Experimental Procedure. ECTION-E : SPECTROSCOPIC METHODS OF ANALYSIS	136-141
14.	Visible Spectrophotometry General; Absorption of radiant Energy; Laws of Photometry; Deviations and sources of Error; Determinations of mixtures; Colorimetry; Instrumentation Aspects; Commercial Instruments.	145-163
15.	· · ·	164-177

309-323

16.	Flame Photometry And Atomic Absorption Spectrophotometry General; Theory; Means of Excitation; Emission Spectra; Instrumentation Aspects; Sources of Errors; Calibration curve and methodology; Atomic Absorption Spectrophotometry; General; Atomic Absorption; Atomic	178-189
17.	Fluorescence, Instrumentation Aspects. Fluorimetry General; Fluorescence; Phosphorescence; Fluorescence and Molecular Structure; Fluorescence and concentration; Quenching; Instrumentation Aspects; Applications; Phosphometry.	1 90-201
18.	infrared Spectrophotometry General; Theory; Instrumentation; Radiation sources; Monochromators; Materials for Prism construction; Detectors; Sample Handling; Structural Analysis; Tables for infrared Absorption Frequencies.	202-216
19.	Nuclear Magnetic Resonance Spectroscopy General; Magnetic and Non-magnetic Nuclei; Nuclear precession; Instrumentation; Diamagnetic and Paramagnetic Fields; NMR Spectrum and scales of measurement; Factors affecting chemical shifts; Spin-Spin interactions; classification of Proton coupling; Spin-Spin Decoupling; Nuclear overhouser effect; Shift Reagents; C-13 NMR Spectroscopy; Applications	217-243
20.	Mass Spectrometry General; mechanism of cation production; Instrumentation Aspects; Spectral Presentation; Fragmentation patterns for organic compounds; Determination of molecular Formula; Rules for Determination of mass spectra; Recent Development; Tables for Fragmentations.	244-274
	SECTION-F : SEPARATION METHODS	
Chapter 21.	Chromatographic Methods Introduction; Plate Theory; Adsorption chromatography; Elution chromatography; Thin layer chromatography; Paper Chromatography; Ion-Exchange chromatography; Gas liquid chromatography; High performance liquid chromatography; High performance thin layer	277-301
22.	chromatography. Electrophoresis General; Theory; Origin of charge; Migration of Ions; Resolution; Buffer; pH and Ionic Strength; Instrumentation Aspects.	302-306
SE	CCTION-G : RADIOCHEMICAL METHODS OF ANALYSIS	

Chapter 23. Methods Using Radioisotopes

General; Binding Energy; Radioactivity and Nuclear Reactions; Background Radiation; Interaction of Radiation with Matter; Quantitative Aspects; Measurement and Instrumentation Aspects; Geiger Counter; Proportional Counter; Scintillation Counter.

SECTION-H : MISCELLANEOUS TYPES OF INSTRUMENTAL METHODS OF ANALYSIS

Chapter 24.	Particle Size Analysis	327-334
_	General; Theory; Apparatus and Methodology;	
25.	Differential Thermal Analysis And Differential Scanning Calorimetry	335-341
	General; Components of Differential Thermal Analyzer and Methodology;	
	Differential Scanning Calorimetry; Quantitative Aspects of DSC;	
	• • • •	

APPENDICES

1.	RESULTS AND ERRORS IN ANALYSIS.	344-347
2.	ELECTRONICS AND ELECTRICAL TERMINOLOGY	348-350
	COMPUTER TERMINOLOGY	351-352
4.	UNITS	353
5.	FUNDAMENTAL CONSTANTS	354
6.	TABLE OF ATOMIC WEIGHTS	355-356

INDEX

357-364