

CONTENTS

Introduction	1
1. The Use of Computers in the Laboratory	3
Part I. The Measurement of Mass	
2. Laboratory Balances	51
3. Organic Elemental Analysis	79
Part II. Spectrochemical Instrumentation	
4. Instrumentation for Atomic Emission Spectroscopy	109
5. Atomic Absorption and Flame Emission Spectrometry	139
6. Ultraviolet and Visible Spectrophotometers	213
7. Instrumentation for Infrared Spectroscopy	233
8. Molecular Fluorescence and Phosphorescence	281
9. Instrumentation for Raman Spectroscopy	313
10. Photoacoustic Instrumentation	337
11. Chiroptical Techniques	361
12. Lasers in Chemical Instrumentation	381
13. Nuclear Magnetic Resonance	393
14. Electron Paramagnetic Resonance	467
15. X-Ray Photoelectron and Auger Electron Spectroscopy	531
Part III. Electrochemical Instrumentation	
16. Potentiometry	569
17. Voltammetry	603
18. Instrumentation for Stripping analysis	619
19. Measurement of Electrolytic Conductance	641
20. Coulometry	661
Part IV. Chromatographic Methods	
21. Modern Gas Chromatographic Instrumentation	673
22. Instrumentation for High-Performance Liquid Chromatography	745
23. Supercritical Fluid Chromatography Instrumentation	843
Part V. Miscellaneous Methods	
24. Mass Spectrometry	885
25. Thermoanalytical Instrumentation	905
26. Automatic Titration	961
27. Continuous-Flow analyzers	979
Abbreviations and Acronyms	1053
Index	1059