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Zeeman Effect; 3 Spectrometers; 3.1 Radiation Sources; 3.1.1 Line Sources; 3.1.2 Continuum Sources; 3.2 The Radiation Train; 3.3 Dispersion and Separation of the Radiation; 3.3.1 Spectral Slitwidth; 3.3.2 Reciprocal Linear Dispersion; 3.4 The Measurement and Correction of Background Attenuation; 3.4.1 Background Correction with Continuum Sources; 3.4.2 Background correction Utilizing the Zeeman Effect; 3.4.3 Background Correction with High Current Pulsing 3.5 The Detection of Radiation 3.6 The Modulation of Radiation; 3.7 Simultaneous Spectrometers; 3.8 Data Acquisition and Output; 3.8.1 Measured Quantities; 3.8.2 Signal Handling; 3.8.3 Baseline Offset Correction; 3.8.4 Integrated Absorbance; 4 Atomizers and Atomizer Units; 4.1 Flame Atomization; 4.1.1 Spectroscopic Flames; 4.1.2 Nebulizer-Burner Systems; 4.1.2.1 Burner Heads; 4.1.2.2 Nebulizers and Spray Chambers; 4.1.3 Special Introduction Techniques for the Measurement solution; 4.1.3.1 The Injection Technique; 4.1.3.2 The Use of Pumps; 4.1.3.3 Flow Injection 4.1.3.4 Hydraulic High Pressure Nebulization 4.2 Electrothermal Atomization; 4.2.1 Graphite Structure and Reactivity; 4.2.2 Graphite Atomizers; 4.2.2.1 Dimensions of Graphite Tubes; 4.2.2.2 Profiled Tubes; 4.2.2.3 Platforms; 4.2.2.4 Probes; 4.2.2.5 Temporally and Spatially Isothermal Atomizers; 4.2.3 Heating Rate and Temperature Program; 4.2.4 Protective Gas and Purge Gas; 4.2.5 Metal Atomizers; 4.2.6 Atomizer Units for GF AAS; 4.2.7 Analysis of Solid Samples; 4.2.7.1 Direct Analysis of Solid Samples; 4.2.7.2 Aids for Direct Solids Analysis; 4.2.7.3 Analysis of Suspensions 4.2.8 Simultaneous Multielement Determinations

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Sommario/riassunto

The thoroughly revised new edition of this best-seller, presents the wide use of AAS in numerous fields of application. The comparison between the different AAS techniques enables the reader to find the best solution for his analytical problem. Authors Bernhard Welz and Michael Sperling have succeeded in finding a balance between theoretical fundamentals and practical applications. The new chapter 'physical fundamentals' describes the basic principles of AAS. The development of AAS is now described in a separate chapter. Further new chapters are devoted to the latest developments in

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