Atomic Absorption Spectrometry

The development of AAS is now described in a separate chapter. Further new chapters are devoted to the latest developments in the field of field ionization and the use of standards for calibration, quality assurance, and validation. Additionally, the role of computers and software in modern AAS is highlighted. This book should be accessible to all chemists, physicists, and materials scientists worldwide. This second edition offers a concise introduction to AAS concepts, essential methodologies, and important applications. It has been comprehensively updated for the latest advances in atomic absorption spectrometry, inductively coupled plasma atomic emission spectrometry (ICP-AES), and inductively coupled plasma mass spectrometry (ICP-MS).


This book is a must for all those who want to know more about HR-CS AAS, and in particular for all future users. The advantages of the new technique over conventional line-source AAS are clearly demonstrated using practical examples and method developments.\n
Different areas of atomic spectroscopy, such as radiation sources, spectrometers, detectors, and other instruments. The text is recommended for practitioners and experts in the field of atomic spectroscopy, especially those looking for a book which describes principles, phenomena, and applications in the field.

Development of a Method for the Determination of Selenium in Plasma/serum Using the Perkin-Elmer 4100ZL Graphite Furnace Atomic Absorption Spectrometer

- Howard M. Kingston 1979

This method provides guidance on the techniques needed to analyze samples in laboratory settings. It covers recent advances in analytical techniques and provides a comprehensive overview of the field.

Methods of Environmental Sampling and Analysis

- John Paul Bonardi 1920

Analysis of Trace Elements in Different Samples

- Curtis A. Palmer 1997

This manual presents analytical data from currently recommended procedures as well as procedures used in the 1980’s by the geochemical laboratories of the National Institute of Standards and Technology. It is an indispensable working resource for analytical chemists and spectroscopists responsible for generating correct analytical results, and it includes analytical protocols for specific contaminants as well as for specific project applications. Covering both field sampling and laboratory analysis, Fundamentals of Environmental Sampling and Analysis includes a review of the basic analytical and instrumental methods used in the field of environmental analysis. It describes the sampling and laboratory methods used to analyze water, sediment, and tissue samples, and it covers the latest advances in analytical techniques.

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Analytical Chemistry, Second Edition, Volume 6: Atomic-Absorption Spectrophotometry focuses on the use of atomic absorption spectrophotometry as an analytical technique. This book describes the use of atomic absorption spectrometry for the determination of metals and metalloids in various sample types, including water, soil, biological materials, and industrial samples. The book covers topics such as sample preparation, instrumental methods, and the interpretation of results. It is a valuable resource for researchers and students in the field of analytical chemistry.

Chapter 1 examines the theory and instrumentation of atomic absorption spectrometry, including the use of different instrumental parameters for the determination of various elements. Chapter 2 introduces the basics of flame atomic absorption spectrometry, with a focus on the optimization of instrumental parameters for different elements. Chapter 3 covers the use of graphite furnace atomic absorption spectrometry, discussing the optimization of instrumental parameters for the determination of trace elements in complex matrices. Chapter 4 provides a comprehensive overview of the use of atomic absorption spectrometry in the field of environmental analysis, including the determination of metals and metalloids in water, soil, and biological samples. Chapter 5 focuses on the use of atomic absorption spectrometry in the field of food analysis, discussing the determination of trace elements in food samples.


- Chunlong Zhang 2007-02-26

An integrated approach to understanding the principles of sampling, chemical analysis, and instrumentation. This unique reference focuses on the overall process of sampling, analysis, and instrumentation. It includes a comprehensive overview of the field, with a focus on the latest advances in analytical techniques.

The Chemical Analysis of Antigenic Pesticide Contaminants C. A. Garfield 1997

This book presents an overview of the different methods used for the determination of metals and metalloids in various sample types. It includes a detailed overview of the principles and instrumentation of atomic absorption spectrometry, as well as practical guidelines for the determination of trace elements in complex matrices.

A Consumers Guide to Instructional Scientific Equipment

- W. T. Elwell 2013-10-22

This text is recommended for practitioners and experts in the field of atomic spectroscopy, especially those looking for a book which describes principles, phenomena, and applications in the field.

The Zeeman/3030 Atomic Absorption Spectrometer: Third Edition

- W. T. Elwell 2013-10-22

This guide to all methods of atomic spectrometry currently recognized by regulatory agencies for the monitoring of metallic contaminants. It is an indispensable working resource for analytical chemists and spectroscopists responsible for generating correct analytical results, and it includes analytical protocols for specific contaminants as well as for specific project applications. Covering both field sampling and laboratory analysis, Fundamentals of Environmental Sampling and Analysis includes a review of the basic analytical and instrumental methods used in the field of environmental analysis. It describes the sampling and laboratory methods used to analyze water, sediment, and tissue samples, and it covers the latest advances in analytical techniques.

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