

This easy-to-read guide the trace element community has been waiting for!

# PRACTICAL GUIDE TO ICP-MS

Practical Guide  
to ICP-MS



Robert Thomas

PRACTICAL SPECTROSCOPY SERIES

**Robert Thomas**

Scientific Solutions, Gaithersburg, Maryland, USA

*“Any new user of ICP-MS or anyone contemplating entering the field will find the Practical Guide to ICP-MS an essential first step. This book demystifies ICP-MS and shows readers just how accessible a technique it really is... [It] is written clearly and is well organized... As a practitioner of ICP-MS for more than 20 years, I highly recommend this book as a primer to students, new users, laboratory managers, and users of ICP-MS data. The price of the book is well worth investing for Chapter 20 alone, which deals with the selection criteria for instrument purchase. More-experienced users and teachers will find that this book is a useful source of information on the current state of ICP-MS and its place in analytical atomic spectrometry.”*

— Spectroscopy Magazine

*“This book will be particularly useful to students and analytical chemists who are about to use an ICP-MS, and also those in management who might have a basic understanding of atomic spectroscopic techniques but not necessarily ICP-MS... [The author] hoped the book might find a place on the analyst’s desk or by the instrument and would be well used. Indeed, this is where my copy will probably be found.”*

— The Analyst

*“... a valuable introduction to the subject for anyone interested in ICP-MS... [a] highly informative book...”*

— Today’s Chemist at Work

*“...[this book] highlights everything from basic component descriptions and features to guidelines describing where and when... ICP-MS is most appropriately employed... I look forward to seeing this book used in many training programs, classrooms, and analysis laboratories.”*

—Ramon M. Barnes, Director,  
University Research Institute of Analytical Chemistry and  
Professor Emeritus of Chemistry,  
University of Massachusetts, Amherst

## FEATURES

- Describes the fundamental principles of the technique in a way that is easy to understand
- Discusses the major sample preparation, contamination, and routine maintenance issues associated with the technique
- Compares ICP-MS to other trace element techniques in terms of detection capability, dynamic range, interferences, accuracy, precision, sample throughput, speed of analysis, operator skill level, and running costs
- Enables novices to weigh the benefits of ICP-MS against more familiar atomic spectroscopy instrumentation methods
- Highlights ways in which ICP-MS is applied in the real-world
- Presents the most important selection criteria when evaluating commercial ICP-MS equipment

## Find fundamental principles, analytical advantages, and practical capabilities of ICP-MS technique

The **Practical Guide to ICP-MS** is an outstanding source of information for analytical chemists in all trace metal application areas who want to have a better understanding of the technique and how it is applied to real-world analytical problems.

Written by a field insider with more than 20 years of experience in the development and application of atomic spectroscopy instrumentation, the **Practical Guide to ICP-MS** offers key concepts and guidelines in a reader-friendly format that is superb for professionals as well as those with limited knowledge of the technique. This reference discusses the fundamental principles, analytical advantages, practical capabilities, and overall benefits of ICP-MS. It presents the most important selection criteria when evaluating commercial ICP-MS equipment and the most common application areas of ICP-MS such as the environmental, semiconductor, geochemical, clinical, nuclear, food, metallurgical, and petrochemical industries.

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