Discover how analytical chemistry supports the latest clinical research

This book details the role played by analytical chemistry in fostering clinical research. Readers will discover how a broad range of analytical techniques support all phases of clinical research, from early stages to the implementation of practical applications. Moreover, the contributing authors’ careful step-by-step guidance enables readers to better understand standardized techniques and steer clear of everyday problems that can arise in the lab.

*Analytical Techniques for Clinical Chemistry* opens with an overview of the legal and regulatory framework governing clinical lab analysis. Next, it details the latest progress in instrumentation and applications in such fields as biomonitoring, diagnostics, food quality, biomarkers, pharmaceuticals, and forensics. Comprised of twenty-five chapters divided into three sections exploring Fundamentals, Selected Applications, and Future Trends, the book covers such critical topics as:

- Uncertainty in clinical chemistry measurements
- Metal toxicology in clinical, forensic, and chemical pathology
- Role of analytical chemistry in the safety of drug therapy
- Atomic spectrometric techniques for the analysis of clinical samples
• Biosensors for drug analysis

• Use of X-ray techniques in medical research

Each chapter is written by one or more leading pioneers and experts in analytical chemistry. Contributions are based on a thorough review and analysis of the current literature as well as the authors’ own firsthand experiences in the lab. References at the end of each chapter serve as a gateway to the literature, enabling readers to explore individual topics in greater depth.

Presenting the latest achievements and challenges in the field, *Analytical Techniques for Clinical Chemistry* sets the foundation for future advances in laboratory research techniques.

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**ABOUT THE AUTHOR**

**SERGIO CAROLI, PhD,** was a research director in the Department of Food and Animal Safety, National Institute of Health in Rome, and Honorary Professor at Eötvös Loránd University. He is the author of approximately 400 papers and editor or coauthor of six books, including *The Determination of Chemical Elements in Food: Applications for Atomic and Mass Spectrometry* (Wiley).

**GYULA ZÁRAY, PhD, DSc,** is a Professor of Analytical Chemistry and the Director of the Cooperative Research Centre for Environmental Sciences at Eötvös Loránd University in Budapest. He has written more than 180 peer-reviewed publications and is the editor or coauthor of three books.

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