The analytical toxicologist may be required to detect, identify, and in many cases measure a wide variety of compounds in samples from almost any part of the body or in related materials such as residues in syringes or in soil. This book gives principles and practical information on the analysis of drugs and poisons in biological specimens, particularly clinical and forensic specimens.

After providing some background information the book covers aspects of sample collection, transport, storage and disposal, and sample preparation. Analytical techniques - colour tests and spectrophotometry, chromatography and electrophoresis, mass spectrometry, and immunoassay – are covered in depth, and a chapter is devoted to the analysis of trace elements and toxic metals. General aspects of method implementation/validation and laboratory operation are detailed, as is the role of the toxicology laboratory in validating and monitoring the performance of point of care testing (POCT) devices. The book concludes with reviews of xenobiotic absorption, distribution and metabolism, pharmacokinetics, and general aspects of the interpretation of analytical toxicology results.

- A clearly written, practical, integrated approach to the basics of analytical toxicology.

- Focuses on analytical, statistical and pharmacokinetic principles rather than detailed applications.

- Assumes only a basic knowledge of analytical chemistry.

- An accompanying website provides additional material and links to related sites.
Written by an experienced team of authors, Fundamentals of Analytical Toxicology is an invaluable resource for those starting out in a career in analytical toxicology across a wide range of disciplines including clinical and forensic science, food safety, and pharmaceutical development.

**Praise from the reviews:**

“This is an ambitious effort to describe in detail the many and varied aspects of the science of toxicological analysis. The 17 chapters cover every foreseeable aspect, from specimen collection through analytical techniques and quality control to pharmacological principles and interpretation of results. The authors bring together a great deal of experience in the field and have succeeded admirably in achieving their goal: "to give principles and practical information on the analysis of drugs, poisons and other relevant analytes in biological specimens...". The book is very readable and quite up-to-date, and contains many illustrative figures, charts and tables. Both the student and the practicing professional would do well to study this material carefully, as there is something here for every conceivable level of interest.”  **Review from Randall Baselt**

“This text comes highly recommended for any analytical toxicology trainee.” The Bulletin of the Royal College of Pathologists

“Overall, this book provides a comprehensive, thorough, clear, up to date and practical treatment of analytical toxicology at a high standard. Understanding of the text is enhanced by the use of many illustrations. Specifications, guidelines, and methods are highlighted in grey background “Boxes”. The many and up to date literature references in each chapter demonstrate the authors’ thorough work and permit easy access to deeper information. Therefore this book can be highly recommended as a valuable source of knowledge in analytical toxicology both as an introduction and for the advanced reader.”  GTFCh Bulletin “Toxichem + Krimtech”, May 2008 (translated, original review in German)

“Many toxicologists will add this important reference to their libraries because it competently fills a need ...” International Journal of Toxicology

“The book is very well illustrated, easy to understand and pleasant to read, and contains a wealth of dedicated information.” International Journal of Environmental Analytical Chemistry

---

**ABOUT THE AUTHOR**

**Robert J. Flanagan.** King’s College Hospital NHS Foundation Trust, London, UK

**Andrew Taylor.** Royal Surrey County Hospital, UK
FEATURES

• A clearly written, practical, integrated approach to the basics of analytical toxicology

• Focuses on analytical, statistical and pharmacokinetic principles rather than detailed applications

• Assumes only a basic knowledge of analytical chemistry

• Follows the International Union of Pure and Applied Chemistry (IUPAC) nomenclature for chemical names

• Experienced, well-known author team

For additional product details, please visit https://www.wiley.com/en-us