Fundamentals of Analytical Toxicology

Gives principles and practical information on the analysis of drugs and poisons in biological specimens, particularly clinical and forensic specimens.

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.

After providing some background information this book covers aspects of sample collection, transport, storage and disposal, and sample preparation. Analytical techniques - colour tests and spectrophotometry, chromatography and electro-phoresis, 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.

Written by an experienced team of authors, it’s 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.

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