

1. Record Nr.	UNINA9910141500003321
Autore	Stuart Barbara (Barbara H.)
Titolo	Forensic analytical techniques / / Barbara Stuart
Pubbl/distr/stampa	Chichester, West Sussex, England : , : Wiley, , [2013] ©2013
ISBN	1-118-49687-6 1-299-18837-0 1-118-49741-4
Descrizione fisica	1 online resource (235 p.)
Collana	Analytical techniques in the sciences
Classificazione	SCI013010
Disciplina	543
Soggetti	Analytical chemistry Forensic sciences Chemistry, Forensic
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (pages 219-220) and index.
Nota di contenuto	Forensic Analytical Techniques; Contents; Series Preface; Preface; About the Author; Acronyms, Abbreviations and Symbols; Chapter 1 The Chemistry of Forensic Evidence; 1.1 Introduction; 1.2 Evidence Types; 1.2.1 Polymers; 1.2.2 Fibres; 1.2.3 Paint; 1.2.4 Documents; 1.2.5 Glass; 1.2.6 Soil; 1.2.7 Explosives; 1.2.8 Firearms; 1.2.9 Arson; 1.2.10 Body Fluids; 1.2.11 Drugs and Toxicology; 1.2.12 Fingerprints; 1.3 Introduction to Data Analysis; 1.4 Summary; References; Chapter 2 Preliminary Tests; 2.1 Introduction; 2.2 Chemical Tests; 2.2.1 Methods; 2.2.2 Drugs and Toxicology; 2.2.3 Body Fluids 2.2.4 Gunshot Residue 2.2.5 Explosives; 2.2.6 Paint; 2.2.7 Documents; 2.3 Density; 2.3.1 Methods; 2.3.2 Glass; 2.3.3 Soil; 2.3.4 Polymers; 2.4 Light Examination; 2.4.1 Methods; 2.4.2 Fingerprints; 2.4.3 Body fluids; 2.4.4 Documents; 2.5 Summary; References; Chapter 3 Microscopic Techniques; 3.1 Introduction; 3.2 Optical Microscopy; 3.2.1 Methods; 3.2.2 Interpretation; 3.2.3 Fibres; 3.2.4 Paint; 3.2.5 Drugs; 3.2.6 Glass; 3.2.7 Soil; 3.2.8 Documents; 3.2.9 Firearms; 3.3 Transmission Electron Microscopy; 3.3.1 Method; 3.3.2 Interpretation; 3.3.3 Paint; 3.4 Scanning Electron Microscopy 3.4.1 Methods 3.4.2 Interpretation; 3.4.3 Gunshot Residue; 3.4.4 Paint;

3.4.5 Fibres; 3.4.6 Documents; 3.4.7 Glass; 3.5 Atomic Force Microscopy; 3.5.1 Methods; 3.5.2 Interpretation; 3.5.3 Documents; 3.6 X-Ray Diffraction; 3.6.1 Methods; 3.6.2 Interpretation; 3.6.3 Explosives; 3.6.4 Paint; 3.6.5 Drugs; 3.6.6 Documents; 3.6.7 Soil; 3.7 Summary; References; Chapter 4 Molecular Spectroscopy; 4.1 Introduction; 4.2 Infrared Spectroscopy; 4.2.1 Methods; 4.2.2 Interpretation; 4.2.3 Paint; 4.2.4 Fibres; 4.2.5 Polymers; 4.2.6 Documents; 4.2.7 Explosives; 4.2.8 Drugs; 4.3 Raman Spectroscopy 4.3.1 Methods 4.3.2 Interpretation; 4.3.3 Drugs; 4.3.4 Paint; 4.3.5 Fibres; 4.3.6 Documents; 4.3.7 Explosives; 4.4 Ultraviolet-visible Spectroscopy; 4.4.1 Methods; 4.4.2 Interpretation; 4.4.3 Fibres; 4.4.4 Paint; 4.4.5 Documents; 4.4.6 Drugs; 4.4.7 Toxicology; 4.5 Fluorescence Spectroscopy; 4.5.1 Methods; 4.5.2 Interpretation; 4.5.3 Body Fluids; 4.5.4 Toxicology; 4.5.5 Fibres; 4.6 Nuclear Magnetic Resonance Spectroscopy; 4.6.1 Methods; 4.6.2 Interpretation; 4.6.3 Drugs; 4.6.4 Explosives; 4.7 Summary; References; Chapter 5 Elemental Analysis; 5.1 Introduction; 5.2 Atomic Spectrometry 5.2.1 Methods 5.2.2 Interpretation; 5.2.3 Glass; 5.2.4 Gunshot Residue; 5.2.5 Toxicology; 5.3 Inductively Coupled Plasma-Mass Spectrometry; 5.3.1 Methods; 5.3.2 Interpretation; 5.3.3 Glass; 5.3.4 Paint; 5.3.5 Gunshot Residue; 5.4 X-Ray Fluorescence Spectroscopy; 5.4.1 Methods; 5.4.2 Interpretation; 5.4.3 Glass; 5.4.4 Gunshot Residue; 5.4.5 Paint; 5.5 Particle-Induced X-Ray Emission Spectroscopy; 5.5.1 Methods; 5.5.2 Interpretation; 5.5.3 Glass; 5.6 Neutron Activation Analysis; 5.7 Summary; References; Chapter 6 Mass Spectrometry; 6.1 Introduction; 6.2 Molecular Mass Spectrometry; 6.2.1 Methods 6.2.2 Interpretation

Sommario/riassunto

"The book will be an open learning / distance learning text in the Analytical Techniques for the Sciences (AnTS) covering analytical techniques used in forensic science. No prior knowledge of the analytical techniques will be required by the reader. An introductory chapter will provide an overview of the science of the materials used as forensic evidence. Each of the following chapters will describe the techniques used in forensic analysis. The theory, instrumentation and sampling techniques will be explained and examples of the application of each technique to particular forensic samples will be provided. The reader will be able to assess their understanding with the use of regular self assessment questions and discussion questions throughout the book. The user of the book will be able to apply their understanding to the application of specific techniques to particular analyses encountered in their professional life"--
