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Autore	Elkins Kelly M
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Descrizione fisica	1 online resource (225 p.)
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Nota di contenuto	Front Cover; Forensic DNA Biology: A Laboratory Manual; Copyright; Contents; Acknowledgements; About the Author; Welcome; Forensic DNA Biology: An Introduction; BIOLOGY OVERVIEW; RESTRICTION FRAGMENT LENGTH POLYMORPHISMS; POLYMERASE CHAIN REACTION; SHORT TANDEM REPEATS; SINGLE NUCLEOTIDE POLYMORPHISMS; MITOCHONDRIAL DNA; KNOWN VERSUS QUESTIONED SAMPLES; WHY STUDY FORENSIC DNA BIOLOGY?; Laboratory Safety; RULES FOR A SAFE LAB ENVIRONMENT; Reference; Avoiding Contamination Issues: Standard Laboratory Practices; Reference; Chapter 1 - Pipetting; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND PROCEDURE; QUESTIONS; GRAPHING THE DATA USING MICROSOFT EXCEL (2003); EQUATIONS; References; Chapter 2 - Serology; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References; Chapter 3 - Sampling Biological Evidence for DNA Extraction; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; DNA COLLECTION AND PACKAGING; QUESTIONS; References; Chapter 4 - DNA Extraction; OBJECTIVE; SAFETY; MATERIALS; RECIPES FOR BUFFER AND SOLUTION PREPARATION;

BACKGROUND; PROCEDURE; QUESTION; References; Chapter 5 - Determination of Quality and Quantity of DNA Using Agarose Gel Electrophoresis  
OBJECTIVES; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; Reference; Chapter 6 - Determination of DNA Quality and Quantity Using UV-Vis Spectroscopy; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References; Chapter 7 - Determination of DNA Quantity by Fluorescence Spectroscopy; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References; Chapter 8 - Real-Time Polymerase Chain Reaction (PCR) Quantitation of DNA; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References  
Chapter 9 - Multiplex Polymerase Chain Reaction (PCR) Primer Design (in Silico)OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References; Chapter 10 - Testing Designed Polymerase Chain Reaction (PCR) Primers in Multiplex Reactions; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References; Chapter 11 - Multiplex Polymerase Chain Reaction (PCR) Amplification of Short Tandem Repeat (STR) Loci Using a Commercial Kit; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References  
Chapter 12 - Capillary Electrophoresis of Short Tandem Repeat (STR) Polymerase Chain Reaction (PCR) Products from a Commercial Multiplex KitOBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTION; References; Chapter 13 - Computing Random Match Probability from DNA Profile Data Using Population Databases; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References; Chapter 14 - Mitochondrial Deoxyribonucleic Acid (mtDNA) Single Nucleotide Polymorphism (SNP) Detection; OBJECTIVE; SAFETY; MATERIALS; BACKGROUND; PROCEDURE; QUESTIONS; References  
Chapter 15 - Analysis of Deoxyribonucleic Acid (DNA) Sequence Data Using BioEdit

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#### Sommario/riassunto

DNA typing has revolutionized criminal investigations and has become a powerful tool in the identification of individuals in criminal and paternity cases. *Forensic DNA Biology: A Laboratory Manual* is comprised of up-to-date and practical experiments and step-by-step instructions on how to perform DNA analysis, including pipetting, microscopy and hair analysis, presumptive testing of body fluids and human DNA typing. Modern DNA typing techniques are provided, reflecting real life, where not all institutions and crime labs can afford the same equipment and software. Real case studies w

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