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6.4 SAMPLE PACKAGING 6.5 EVIDENCE ADMINISTRATION AND TRANSPORTATION; REFERENCES; CHAPTER 7: Flammable and Combustible Liquids; 7.1 INTRODUCTION; 7.2 HISTORY; 7.3 SOURCES OF CRUDE OIL; 7.4 COMPOSITION OF CRUDE OIL; 7.5 REFINING PROCESSES; 7.6 PETROLEUM PRODUCT PROPERTIES; 7.7 THE ASTM CLASSIFICATION SCHEME; REFERENCES; CHAPTER 8: Gas Chromatography and Gas Chromatography-Mass Spectrometry; 8.1 INTRODUCTION; 8.2 CHROMATOGRAPHIC THEORY; 8.3 GAS CHROMATOGRAPHY; 8.4 MASS SPECTROMETRY; 8.5 PARAMETERS USED IN FIRE DEBRIS ANALYSIS

8.6 DATA ANALYSIS AND INTERPRETATION METHODS IN GAS CHROMATOGRAPHY-MASS SPECTROMETRY REFERENCES; CHAPTER 9: Interpretation of Data Obtained from Neat Ignitable Liquids; 9.1 INTRODUCTION; 9.2 PETROLEUM v. NONPETROLEUM IGNITABLE LIQUIDS; 9.3 BOILING POINT RANGE; 9.4 PETROLEUM-BASED IGNITABLE LIQUIDS; 9.5 GASOLINE; 9.6 PETROLEUM DISTILLATES; 9.7 ISOPARAFFINIC PRODUCTS; 9.8 NAPHTHENIC PARAFFINIC PRODUCTS; 9.9 NORMAL-ALKANE PRODUCTS; 9.10 AROMATIC PRODUCTS; 9.11 NONPETROLEUM-BASED IGNITABLE LIQUIDS; 9.12 IGNITABLE LIQUID IDENTIFICATION SCHEME; 9.13 COMPARISON OF IGNITABLE LIQUIDS; REFERENCES

CHAPTER 10: Preliminary Examination of Evidence 10.1 INTRODUCTION; 10.2 DOCUMENTATION; 10.3 INITIAL OBSERVATION; 10.4 OTHER FORENSIC EXAMINATIONS; 10.5 DETAILED OBSERVATIONS; REFERENCES; CHAPTER 11: Extraction of Ignitable Liquid Residues from Fire Debris; 11.1 INTRODUCTION; 11.2 DISTILLATION TECHNIQUES; 11.3 SOLVENT EXTRACTION TECHNIQUES; 11.4 HEADSPACE TECHNIQUE; 11.5 ADSORPTION TECHNIQUES; 11.6 CHOOSING THE RIGHT TECHNIQUE; REFERENCES; CHAPTER 12: Interpretation of Ignitable Liquid Residues Extracted from Fire Debris; 12.1 INTRODUCTION; 12.2 MATERIALS CONSTITUTING SUBSTRATES

12.3 CONCEPT OF INTERFERING PRODUCTS

Sommario/riassunto

The study of fire debris analysis is vital to the function of all fire investigations, and, as such, Fire Debris Analysis is an essential resource for fire investigators. The present methods of analysis include the use of gas chromatography and gas chromatography-mass spectrometry, techniques which are well established and used by crime laboratories throughout the world. However, despite their universality, this is the first comprehensive resource that addresses their application to fire debris analysis. Fire Debris Analysis covers topics such as the physics and chemistry

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