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Nota di contenuto	GC/MS in Clinical Chemistry; Contents; Part I Fundamental Principles of Analysis by Gas Chromatography and Mass Spectrometry; 1. Physical Theory and Equipment Design; 1.1 Adsorption; 1.2 Partition; 1.3 Design of a Gas Chromatography System; 2. Injection and Headspace Technique; 2.1 Injection; 2.1.1 Splitless Injection; 2.1.2 Split Injection; 2.1.3 Temperature-Programmed Injection; 2.1.4 On-Column Injection; 2.2 Headspace Technique; 2.2.1 Static Headspace; 2.2.2 Dynamic Headspace; 3. Columns and Carrier Gas; 3.1 Packed Columns; 3.2 Capillary Columns; 3.3 Stationary Phases; 3.4 Film Thickness 3.5 Carrier Gas4. GC Detectors and Mass Spectrometry; 4.1 Selectivity; 4.2 The Flame Ionization Detector (FID); 4.3 The Electron Capture Detector (ECD); 4.4 Mass Spectrometry; 4.4.1 Design and Function of a Quadrupole Mass Spectrometer; 4.4.2 Detection; 4.4.3 Sample Introduction - the GC/MS Interface; 4.4.4 The Total Ion Current (TIC); 4.4.5 Selected Ion Monitoring (SIM); 4.4.6 Data Processing; 5. Quantification; 5.1 Methods Based on Internal Standards; 5.2 Standard Addition; 5.3 External Calibration; 5.4 Quantification in the Split Mode;

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Sommario/riassunto

This book enables the reader to gain a rapid understanding of GC/MS analysis through a basic knowledge of the fundamental principles, linking these with simple and practical applications in the field of industrial medicine and analysis of drugs. Additional information from other specialist fields is also provided with the aim of helping the analyst to understand their relevance to the interpretation of results. The book describes efficient methods of sample preparation and quality assurance and provides information on epidemiology and pharmacology, without which drug screening is impossible.<
