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Nota di contenuto	LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY: AN INTRODUCTION; Contents; Series Preface; Preface; Acknowledgements; Abbreviations, Acronyms and Symbols; About the Author; 1 Introduction; 1.1 What are the Advantages of Linking High Performance Liquid Chromatography with Mass Spectrometry?; 1.2 What Capabilities are Required of the Combination?; 1.3 What Problems, if Any, Have to be Addressed to Allow the LC-MS Combination to Function, and Function Effectively?; References; 2 Liquid Chromatography; 2.1 Introduction; 2.2 High Performance Liquid Chromatography; 2.2.1 Pump 2.2.2 Sample Introduction (Injector)2.2.3 Mobile Phase; 2.2.4 Stationary Phase; 2.2.5 Detectors; 2.3 Chromatographic Properties; 2.4 Identification Using High Performance Liquid Chromatography; 2.5

Quantitation Using High Performance Liquid Chromatography; 2.6 The Need for High Performance Liquid Chromatography-Mass Spectrometry; References; 3 Mass Spectrometry; 3.1 Introduction; 3.2 Ionization Methods; 3.2.1 Electron Ionization; 3.2.2 Chemical Ionization; 3.2.3 Fast-Atom Bombardment; 3.2.4 Matrix-Assisted Laser Desorption Ionization; 3.2.5 Negative Ionization; 3.3 Ion Separation 3.3.1 The Quadrupole Mass Analyser 3.3.2 The (Quadrupole) Ion-Trap Mass Analyser; 3.3.3 The Double-Focusing and Tri-Sector Mass Analysers; 3.3.4 The Time-of-Flight Mass Analyser; 3.4 Tandem Mass Spectrometry (MS-MS); 3.4.1 Instrumentation; 3.4.2 Techniques; 3.5 Data Acquisition; 3.5.1 Identification; 3.5.2 Quantitation; 3.6 Processing of Mass Spectral Data; 3.6.1 The Total-Ion-Current Trace; 3.6.2 Qualitative Analysis; 3.6.3 Quantitative Analysis; 3.6.4 The Use of Tandem Mass Spectrometry; References; 4 Interface Technology; 4.1 Introduction; 4.2 The Moving-Belt Interface 4.3 The Direct-Liquid-Introduction Interface 4.4 The Continuous-Flow/Frit (Dynamic) Fast-Atom-Bombardment Interface; 4.5 The Particle-Beam Interface; 4.6 The Thermospray Interface; 4.7 The Electrospray Interface; 4.7.1 The Mechanism of Electrospray Ionization; 4.7.2 Sample Types; 4.7.3 The Appearance of the Electrospray Spectrum; 4.7.4 Structural Information from Electrospray Ionization; 4.8 The Atmospheric-Pressure Chemical Ionization Interface; 4.8.1 The Mechanism of Atmospheric-Pressure Chemical Ionization; References 5 Applications of High Performance Liquid Chromatography-Mass Spectrometry 5.1 Method Development; 5.1.1 The Use of Experimental Design for Method Development; 5.1.2 The Choice of Electrospray or APCI; 5.2 The Molecular Weight Determination of Biopolymers; 5.2.1 Electrospray Spectra of Co-Eluting Components; 5.2.2 The Use of Selected-Ion Monitoring to Examine the Number of Terminal Galactose Moieties on a Glycoprotein; 5.2.3 The Effect of Mobile-Phase Additives and Cone-Voltage; 5.3 Structure Determination of Biopolymers; 5.3.1 Amino Acid Sequencing of Proteins 5.3.2 The Use of Enzymes for Amino Acid Sequencing

Sommario/riassunto

First explaining the basic principles of liquid chromatography and mass spectrometry and then discussing the current applications and practical benefits of LC-MS, along with descriptions of the basic instrumentation, this title will prove to be the indispensable reference source for everyone wishing to use this increasingly important tandem technique.* First book to concentrate on principles of LC-MS* Explains principles of mass spectrometry and chromatography before moving on to LC-MS* Describes instrumental aspects of LC-MS* Discusses current applications of LC-MS and shows b
