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Autore	Kinter Michael
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Nota di contenuto	PROTEIN SEQUENCING AND IDENTIFICATION USING TANDEM MASS SPECTROMETRY; CONTENTS; Series Preface; Preface; Chapter 1. An Introduction to Protein Sequencing Using Tandem Mass Spectrometry; 1.1. Introduction; 1.2. References; Chapter 2. The Primary Structure of Proteins and a Historical Overview of Protein Sequencing; 2.1. Protein and Peptide Structure; 2.2. Edman Degradation; 2.2.1. The Edman Reaction; 2.2.2. Incorporation of the Edman Degradation Reaction into Automated Protein Sequenators; 2.2.3. Edman Degradation in Proteomic Research; 2.3. Tandem Mass Spectrometry 2.3.1. A Brief History of the Application of Mass Spectrometry to Protein Sequencing2.3.2. Sequence Analysis of Peptides Using Electron Ionization Mass Spectrometry; 2.3.3. The Utilization of Fast Atom Bombardment with Tandem Mass Spectrometry to Sequence Peptides; 2.3.4. Internal Sequence Analysis of Proteins Using Electrospray Ionization-Tandem Mass Spectrometry and Matrix-Assisted Laser

Desorption/Ionization-Time-of-Flight Mass Spectrometry; 2.4. Summary; 2.5. References; Chapter 3. Fundamental Mass Spectrometry; 3.1. An Overview of the Instrumentation; 3.2. Ionization Methods 3.2.1. Electrospray Ionization 3.2.2. Nanospray and Microspray Ionization; 3.2.3. Matrix-Assisted Laser Desorption/Ionization; 3.3. Mass Analyzers; 3.3.1. Fundamental Parameters of Mass Analysis; 3.3.2. Quadrupole Mass Filters (3.20); 3.3.3. Ion Trap Mass Analyzers (3.21-3.23); 3.3.4. Time-of-Flight Mass Analyzers (3.5); 3.4. Tandem Mass Spectrometry; 3.4.1. Collisionally Induced Dissociation; 3.4.2. Tandem Mass Spectrometers; 3.4.3. Types of Tandem Mass Spectrometry Experiments; 3.5. Data Systems; 3.6. Summary; 3.7. References

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## Sommario/riassunto

How to design, execute, and interpret experiments for protein sequencing using mass spectrometry The rapid expansion of searchable protein and DNA databases in recent years has triggered an explosive growth in the application of mass spectrometry to protein sequencing. This timely and authoritative book provides professionals and scientists in biotechnology research with complete coverage of procedures for analyzing protein sequences by mass spectrometry, including step-by-step guidelines for sample preparation, analysis, and data interpretation. Michael Kinter and Nicholas Sherman