

Practical Mass Spectrometric Characterization and Quantitation of Protein Therapeutics

➤ Course Description Summary

- Designed for practicing analytical scientists performing & supporting recombinant protein characterization/analysis, in-process testing, quality control, quality assurance, research and development, and manufacturing
- Covering the fundamental principles and practical applications of MS for the characterization and quantitation of protein therapeutics with a focus on monoclonal antibodies including antibody-drug conjugates (ADCs)
- Emphasizing problem-solving skills

➤ Prerequisite

- Working knowledge of mass spectrometry and/or protein chemistry

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- Introductions to Protein Therapeutics MS
 - ESI & MALDI for Protein Therapeutics
 - Mass Spectra of Protein Therapeutics
 - Peptide Fragmentation
- Commonly Used Mass Analyzers for Analysis of Protein Therapeutics
 - Quadrupole
 - Ion Trap
 - Time-of-Flight
 - Orbitrap
 - Tandem MS (MS/MS)

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- MS Method Development for Analysis of Protein Therapeutics
 - Intact Mass Analysis
 - Peptide Mapping
 - Analysis of ADCs
 - Characterization of Higher Order Structures/HDX-MS
- Characterization of Modifications in Protein Therapeutics
 - Oxidation
 - Deamidation / Isomerization
 - Glycosylation
 - PEGylation / Conjugation
 - Unknown Identification

Practical Mass Spectrometric Characterization and Quantitation of Protein Therapeutics

- Quantitative Analysis of Protein Therapeutics
 - Sample Preparation
 - Relative Quantitation of Modifications
 - *In vivo* Quantitation