

USAM

BIO 2023

Mass spectrometry

► Proteomics Studies: *Characterization of Biotechnological Products*

Identification

- Peptide mapping
- N-terminal amino end sequence
- Molecular mass

Structure

- Mapping of disulfide bridges
- Primary sequence
- Post-translational modifications

► Mass protein identification

► Bioinformatic analysis of peptides and proteins

► Studies of Metabolomics of directed and non-directed plant extracts

► Chemical stability studies of active ingredients

Molecular and Microbiological Methods

► Cell culture assays

Cytotoxicity and cell viability assays.

Induction of hypoxia in cell culture to assess drug response.

Study of gene expression in cell culture

► Development and validation of methods for determining impurities by real-time PCR.

Development and validation of methods for determining elemental impurities by ICP-OES or ICP-MS

Raman spectroscopy (non-destructive technique)

-Identification of raw materials

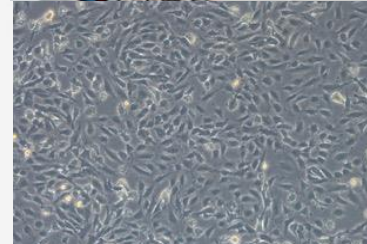
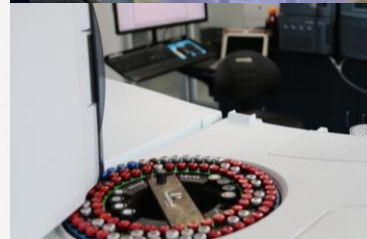
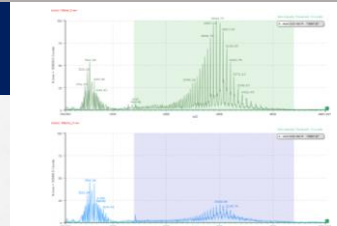
-Determination of active substances

-Polymorphic evaluations

-Monitoring reactants, intermediates, and end product concentrations, determining pathways, kinetics, mechanisms, endpoints, and yields for various reaction types, such as Diels-Alder, Fischer esterification, Grignard, and hydrogenation.

-Optimize the conditions of the process. Drug synthesis and crystallization.

Identification of falsified medicines



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