



LIQUID PHASE SEPARATION AND MASS SPECTROMETRY FOR THE ANALYSIS OF COMPLEX BIOLOGICAL SYSTEMS

We perform molecular analysis of biological samples from various body fluids focusing on post-translational modifications (glycosylation). Glycans are separated from proteins by an enzymatic treatment and then fluorescently derivatised to detect very small amounts of samples (<1µg). The analysis is performed with a high-resolution and high-throughput ultra-high pressure liquid chromatography system in combination with fluorescent and mass spectrometric detection. We also work with quality control of monoclonal antibodies, which includes intact protein analysis and identification of various aggregates, and with identification of post-translational modifications of proteins.

COMPETENCIES

- Hydrophilic interaction liquid chromatography
- Ion exchange chromatography
- Size exclusion chromatography
- Reverse phase chromatography
- Determination of amino acid composition of proteins
- Monosaccharide analysis
- Examination of protein aggregates



SERVICES

- Determination of glycan structures in a given sample
- Determination of monosaccharide composition
- Detection of disease-specific alterations
- Detection of protein modifications



TOOLS

- Waters UPLC-MS
- Empower Chromatography Software
- Glykeworkbench
- Peptidmass