

Protein-works – Intact Mass Measurement

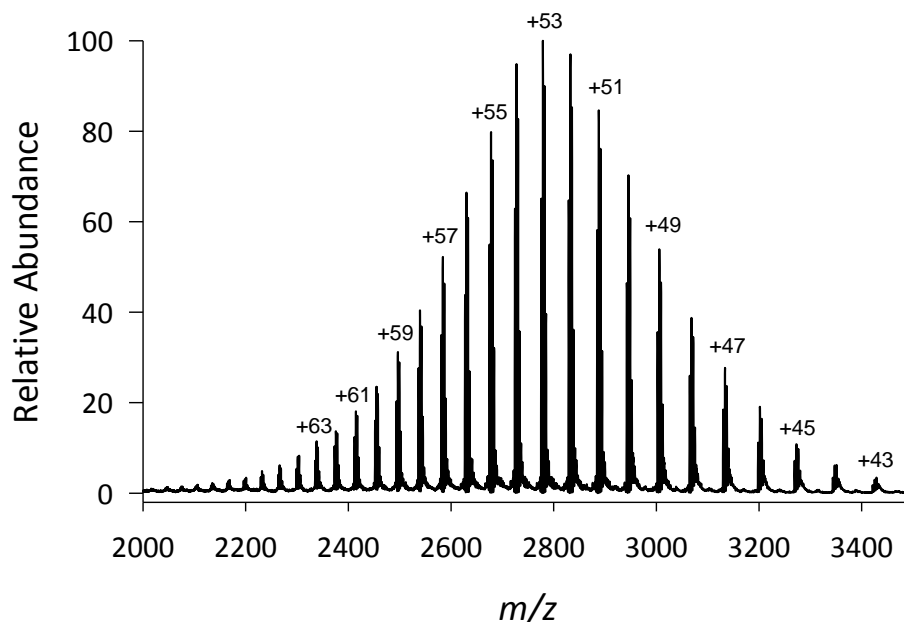
MS Bioworks intact mass measurement service (MSB-04) enables the determination of the mass of a large biomolecule with little or no sample processing. In the example below the intact mass of a therapeutic antibody was measured. The data here are used not only to confirm the molecular weight of the antibody but also to assess the glycosylation status of the molecule.

Experimental

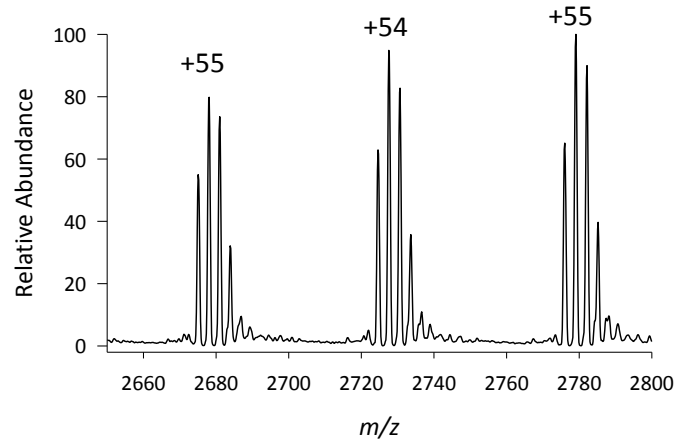
A therapeutic antibody sample was received in complex high salt, high detergent matrix, the sample was cleaned up using MS Bioworks standard protocols. 2 µg of the cleaned sample was analyzed by LC/MS using a phenyl column (Waters MassPREP Micro Desalting Column P/N 186004032) interfaced to a Thermo Fisher Scientific Q Exactive mass spectrometer. LC/MS Data were processed with MagTran Version 1.3. The observed signal (marked with an asterisk in the deconvoluted spectrum) was compared to the calculated mass to enable the mass accuracy calculation. Details of the calculated mass values are below.

Results

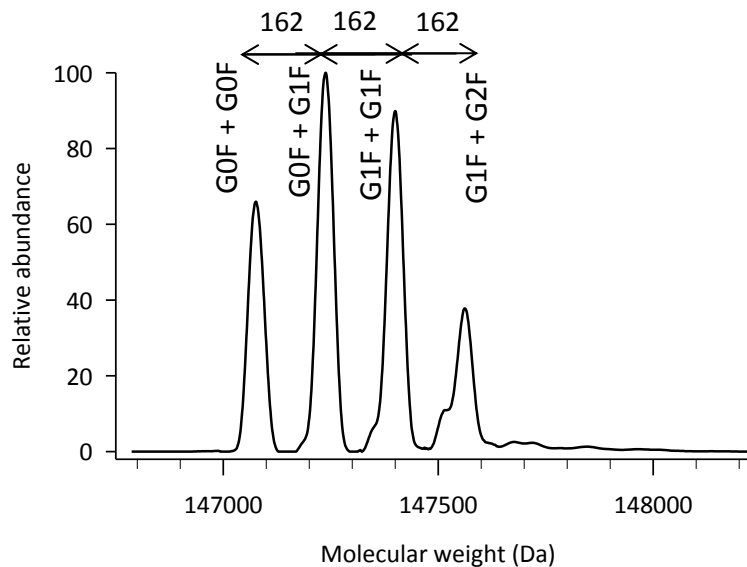
The mass spectrum for the intact antibody is presented below.



A magnified view of the antibody mass spectrum is below.



The deconvoluted mass spectrum for the intact antibody is presented below.



Antibody 2G0F measured mass (Da)	147075
Antibody calculated 2G0F average mass (Da)	147087
Mass Error (Da)	12
% Error	0.008%