

Stable isotope labeling for profiling of IgG Fc glycosylation

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Mass spectrometric approach together with stable isotope labeling of glycopeptides was applied to monitor changes in glycosylation profile of Fc region of immunoglobulin G. Succinic anhydride was used as a label as it is known to bind easily to primary amino groups present in all peptides and does not affect the glycan portion during the labeling reaction. A simple sample preparation protocol consisting of an in-solution trypsin digestion, a 60 minutes “one-pot” labeling procedure and a solid phase extraction was established. Analysis of the labeled glycopeptides was finally done by nano-LC-MALDI-MS, nano-LC-ESI-MS or by a direct MALDI-MS spotting.