The hydrogen-deuterium exchange at α-carbon atom in *N, N,N,*-trialkylglycine residue: ESI-MS studies.

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Streszczenie

Derivatization of peptides as quaternary ammonium salts (QAS) is a known method for sensitive detection by electrospray ionization tandem mass spectrometry. Hydrogens at α-carbon atom in *N*,*N*,*N*-trialkylglycine residue can be easily exchanged by deuterons. The exchange reaction is base-catalyzed and is dramatically slow at lower pH. Introduced deuterons are stable in acidic aqueous solution and are not back-exchanged during LC-MS analysis. Increased ionization efficiency, provided by the fixed positive charge on QAS group, as well as the deuterium labeling, enables the analysis of trace amounts of peptides.

Słowa kluczowe

Quaternary ammonium salts, HDX, Betaine, Charge-tagged peptides

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