Derivatization of peptides as quaternary ammonium salts for sensitive detection by ESI-MS.

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Streszczenie

A series of model peptides in the form of quaternary ammonium salts at the *N*-terminus was efficiently prepared by the solid-phase synthesis. Tandem mass spectrometric analysis of the peptide quaternary ammonium derivatives was shown to provide sequence confirmation and enhanced detection. We designed the 2-(1,4-diazabicyclo[2.2.2] octylammonium)acetyl quaternary ammonium group which does not suffer from neutral losses during MS/MS experiments. The presented quaternization of 1,4-diazabicyclo[2.2.2]octane (DABCO) by iodoacetylated peptides is relatively easy and compatible with standard solid-phase peptide synthesis. This methodology offers a novel sensitive approach to analyze peptides and other compounds.

Słowa kluczowe

quaternary ammonium salts, Derivatization of peptides, peptide fragmentation, sequencing

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