

Microwave-assisted ^{18}O labeling of Fmoc-protected amino acids.

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Recently, there has been an increased interest in isotopical labeling of peptides. Although there are several techniques allowing for a complete labeling of all carboxyl groups in peptides, regioselective labeling would be beneficial in many situations. Such labeling requires the use of ^{18}O -labeled Fmoc amino acids. We have designed a method for such labeling that is an improvement on a technique proposed earlier. The new procedure is suitable for microscale synthesis and could be used in peptide and proteomics laboratories. Although for the majority of tested amino acids our method gives good labeling efficiency, it is time consuming. Therefore, we have decided to use microwave-assisted procedure. This approach resulted in reduction of reaction time to 15 min and increased reaction efficiency.

Słowa kluczowe

^{18}O labeling, quantitative proteomics, peptide synthesis, stable isotopes, microwave-assisted labeling

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