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LETTER

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Benzotriazole Reagents for the Syntheses of Fmoc-, Boc-, and Alloc-Protected Amino Acids

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Abstract

Stable Fmoc-, Boc-, and Alloc-benzotriazoles react with various amino acids including unprotected serine and glutamic acid, in the presence of triethylamine at 20 ˚C as reagents to introduce α-amino protecting groups to afford Fmoc-, Boc-, and Alloc-protected amino acids (77-94%) free of dipeptide and tripeptide impurities. Fmoc-, and Alloc-Gly-Gly-OH dipeptides were prepared in 90% yields by N-acylation of glycylglycine with Fmoc- and Alloc-benzotriazoles in the presence of triethylamine. Synthesized N-protected amino acids were greater than 99% pure, analyzed by HPLC.

Key words

amino acids - benzotriazole - protecting groups - acylation - HPLC

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