

Deprotection of 2,2-Dimethyl-2-(*o*-nitrophenyl)acetyl (DMNA) Group in Amino Acids and Peptides

Category

Peptide Chemistry

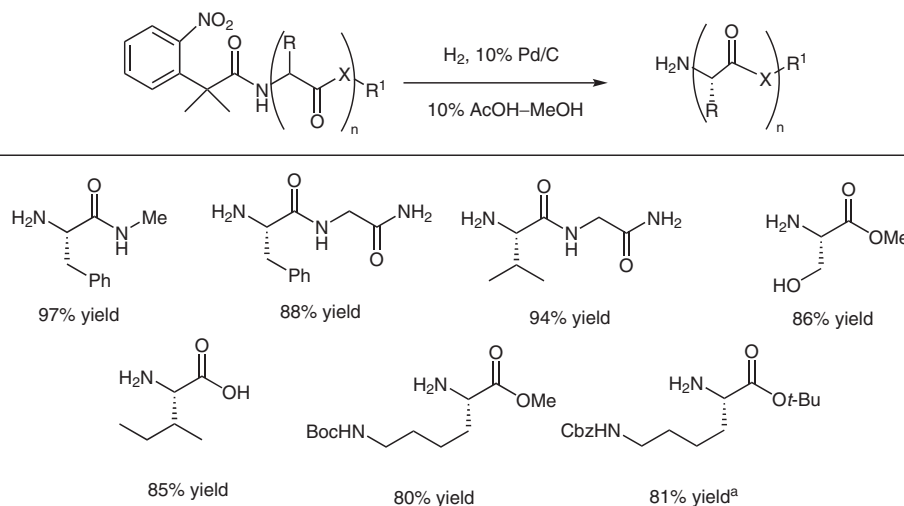
Key words

protecting groups

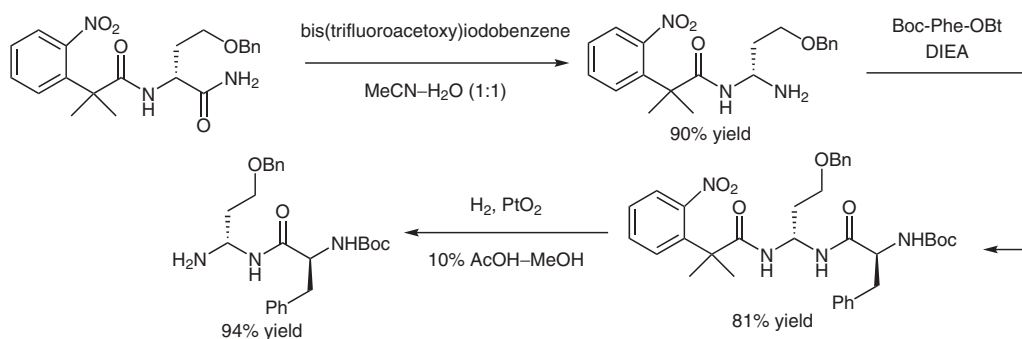
2,2-dimethyl-2-(*o*-nitrophenyl)acetyl group

hydrogenation

Synfact
Classic



^a PtO₂ was used as catalyst instead of Pd/C.



Significance: Protecting groups play an inherent role in organic synthesis. They are the backbone for peptide drug discovery. Thus, chemists are always looking to develop new protecting groups which can easily be installed and removed after the reaction. In 2002, the authors developed a one-step protocol for the deprotection of 2,2-dimethyl-2-(*o*-nitrophenyl) acetyl (DMNA) group in amino acid derivatives and peptides.

Comment: Pd/C- or PtO₂-catalyzed hydrogenation in presence of 10% AcOH is highly efficient for the deprotection of 2,2-dimethyl-2-(*o*-nitrophenyl) acetyl (DMNA) group in amino acid derivatives and peptides. This protocol is simple and mild. Other protecting groups are not affected under these reaction conditions.