

Rapid, effective deprotection of tert-butoxycarbonyl (boc) amino acids and peptides at high temperatures using a thermally stable ionic liquid

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Abstract

A method for high temperature Boc deprotection of amino acids and peptides in a phosphonium ionic liquid is described. The ionic liquid had low viscosity, high thermal stability and demonstrated a beneficial effect. The study extended the possibility for extraction of water soluble polar organic molecules using ionic liquids. Trace water significantly improved product purity and yield, while only 2 equiv. TFA led to deprotection within 10 min. The trityl group was also deprotected.

Keywords: Boc deprotection; phosphonium; deprotection; trityl; deprotected.