

Category**Peptide Chemistry****Key words**

protecting groups

selective deprotection

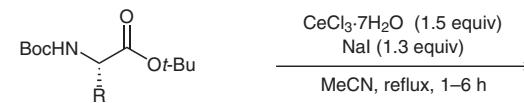
cerium(III) chloride

sodium iodide

Synfact
Classic

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 Selective Deprotection of N-Boc-Protected *tert*-Butyl Ester Amino Acids by the CeCl₃·7H₂O-NaI System in Acetonitrile
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Selective Deprotection of *tert*-Butyl Ester Groups in N-Boc-Protected Amino Acid *tert*-Butyl Esters



Entry	Substrate	Product	Yield	Entry	Substrate	Product	Yield
1			75%	7			80%
2			99%	8			75%
3			87%	9			87%
4			78%	10			79%
5			80%				
6			89%				

Significance: Most commonly in amino acids, the amine group is protected with a Boc group and the carboxylic acid functionality is protected with a *tert*-butyl group. Hence, selective deprotection of a *tert*-butyl ester group in presence of N-Boc is highly challenging. In 2001, the authors developed a cerium(III) chloride and NaI-mediated selective deprotection of *tert*-butyl esters in the presence of N-Boc-protected amino acids.

Comment: Selective deprotection of *tert*-butyl esters in the presence of N-Boc-protected amino acids with the help of cerium(III) chloride and NaI proceeded smoothly to afford the desired products in good yield. This protocol is practically very simple, cost-effective, and showcases a broad functional group tolerance.