Synthesis of Glycosyl Cyanides by the Reaction of 1-S-Phosphorothioates of Carbohydrates with Trimethylsilyl Cyanide

Wiesława Kudelska
Institute of Chemistry, Faculty of Pharmacy, Medical University of Łódź, 90-151 Łódź, Muszyńskiego 1, Poland
Z. Naturforsch. 53 b, 1277–1280 (1998); received July 23, 1998
S-Glycosylphosphorothioates, Glycosyl Cyanides, Synthesis

A new procedure is described for the synthesis of α,β-glycosyl cyanides by the reaction of per-O-benzylated S-α-D-glycopyranosyl phosphorothioates with trimethylsilyl cyanide in the presence of Lewis acid. Starting S-glycosyl phosphorothioates are prepared, directly, from O-benzyl protected reducing D-hexopyranoses (gluco-, galacto-, manno-) and alkylammonium salt of phosphorothioic acid under Lewis acid catalysis.

* Reprint requests to Dr. W. Kudelska.