Synthesis of C-Glycosides from S-Glycosyl Phosphorothioates

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Z. Naturforsch. 57b, 243–247 (2002); received October 16, 2001

S-Glycosyl Phosphorothioates, C-Glycosides, Synthesis

Treatment of O-benzyl protected S-glucosyl phosphorothioates with 1,3,5-trimethoxybenzene in the presence of iodine or boron trifluoride etherate led to appropriate aryl C-β-D-glucosides. The reaction of O-benzyl and O-acetyl-protected phosphorothioates of monosaccharides with allyltrimethylsilane, using boron trifluoride etherate as activator, gave mainly or exclusively, the corresponding 3-(α-D-glycopyranosyl)-1-propenes. C-Glucosidation of furan with O-benzyl protected S-glucosyl phosphorothioate in the presence of boron trifluoride etherate afforded (2-furyl)-α-C-glucoside.