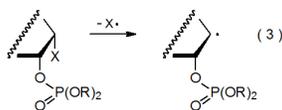
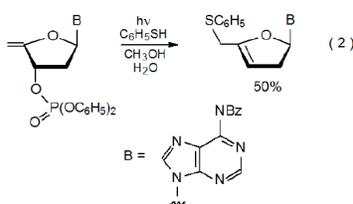
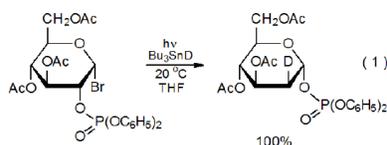


CHAPTER OVERVIEW

9: Phosphoric Acid Esters

Two types of radical reaction of phosphoric acid esters are important in carbohydrate chemistry. One of these is migration of a phosphatoxy group from C-2 to C-1 in a pyranoid or furanoid ring (eq 1),¹ and the other is elimination of this group from C-3' in nucleotide derivatives (eq 2).² Even though these reactions are different in their outcome and very specific in terms of the type of structure undergoing reaction, they are mechanistically similar. An indication of this similarity is that each reaction begins by forming a radical in which a phosphatoxy group is β -related to the radical center (eq 3).



X = a radical-forming substituent
R = an aryl or alkyl group

Topic hierarchy

- II. Phosphatoxy Group Migration
- III. Radical Cation Formation from Nucleotides
- IV. Migration Reactions in Other β -Ester Radicals
- V. Summary

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