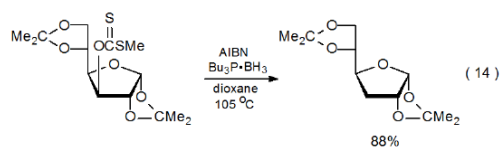


V. Compounds with Boron–Hydrogen Bonds

Phosphine-boranes (**15**) (□ [Figure 2](#)) are a group of compounds that have the ability to react selectively with xanthates in the presence of compounds containing bromine or chlorine (but not iodine).¹¹ For example, cyclohexyl bromide is recovered without change when it is added to the reaction shown in eq 14; in contrast, tri-*n*-butyltin hydride and most other hydrogen-atom transfers used in radical reactions readily dehalogenate bromides. If this lack of reactivity between alkyl bromides and phosphine-boranes extends to halogenated carbohydrates, it will make possible their chemoselective deoxygenation without dehalogenation.



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