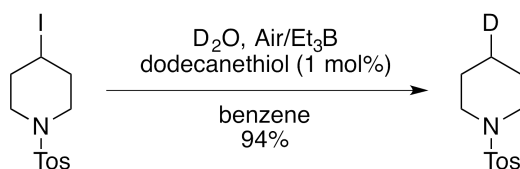


Thiol-Catalyzed Radical Deuteration of Alkyl Iodides Mediated by Triethylborane and Deuterium OxideV. Soulard¹, G. Villa¹, D. Vollmar¹, P. Renaud^{1*}¹University of Bern

Preparation of organic compounds selectively labelled with deuterium atom, remains a challenging synthetic problem [1]. Radical deuteration of alkyl halides is one of the most efficient approach to perform this task. It is usually run using organotin deuterides [2] but this method has three major drawbacks: organotin deuterides are expensive, toxic [3] and led to product contamination.

We report here a method to deuterate alkyl iodides via a radical pathway with deuterated water or methanol as source of deuterium atom. Triethylborane is used to initiate and propagate the chain and dodecanethiol is used as a catalyst [4]. High deuterations and yields are obtained using this method.



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