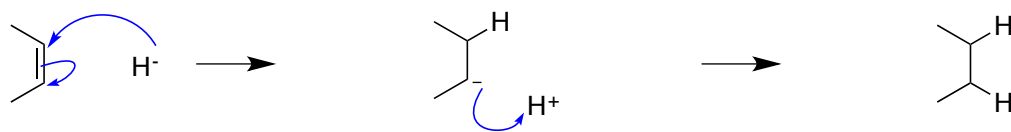


Hydridic Reductions

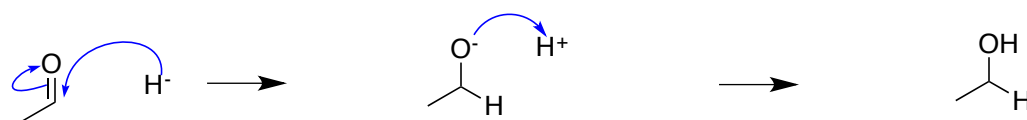
from chapter(s) _____ in the recommended text

A. Introduction

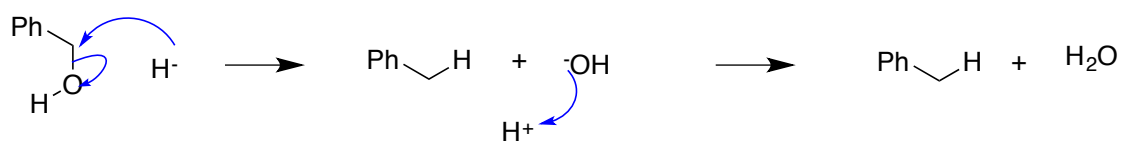
B. Mechanism



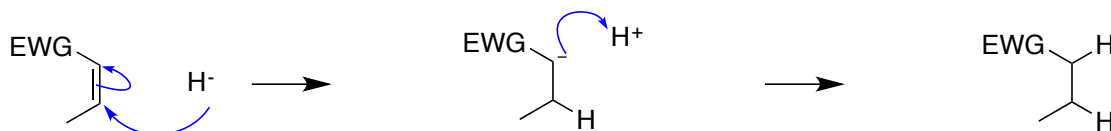
hard



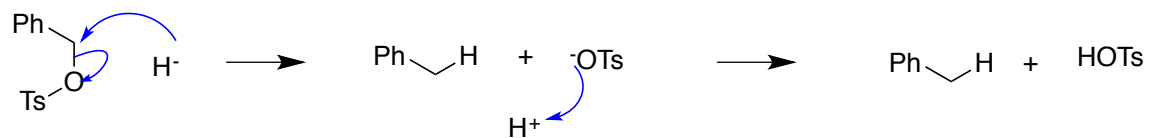
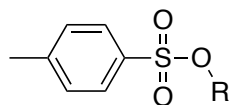
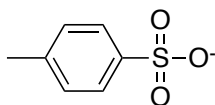
easy



hard



easy

*easy**Ts**TsO⁻*

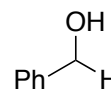
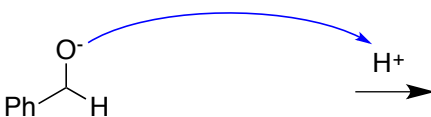
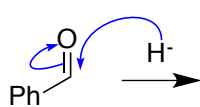
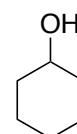
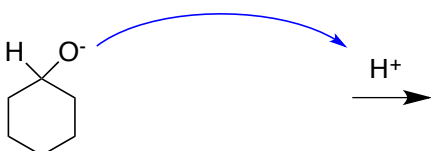
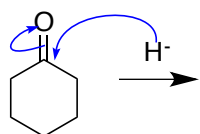
easy to reduce
hard to reduce them

tosylates are
tosyl groups are
ionic
chemoselective reductions

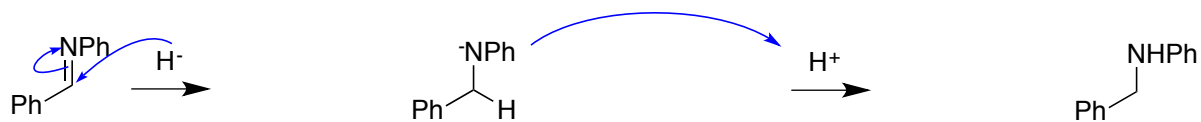
do not tend

C. Substrate Scope

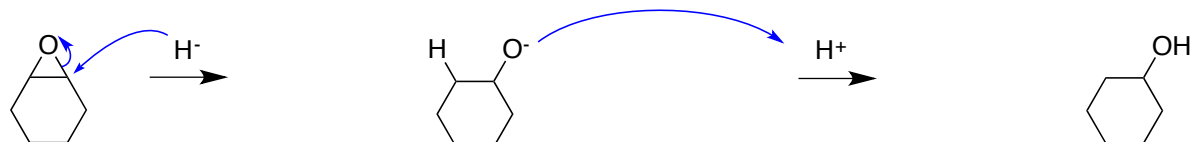
One Reduction

*alkoxide**alkoxide*

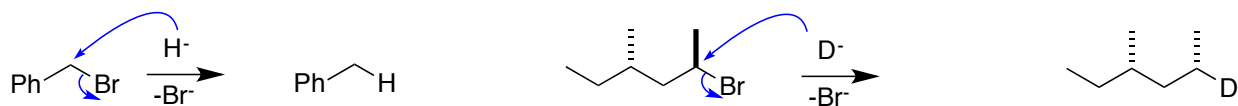
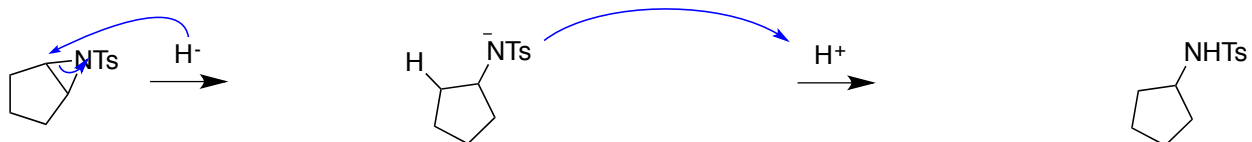
NaBH_4 because



amide anion

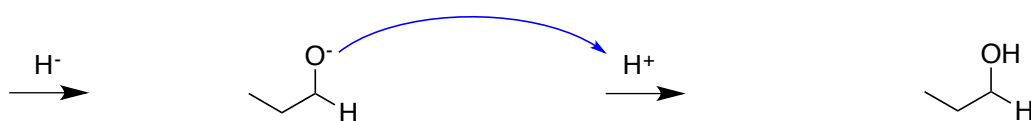
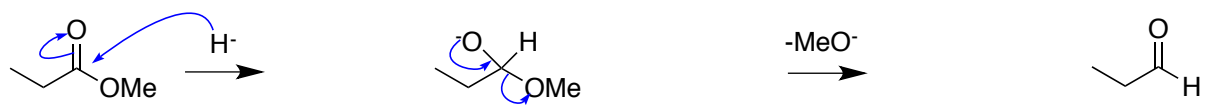
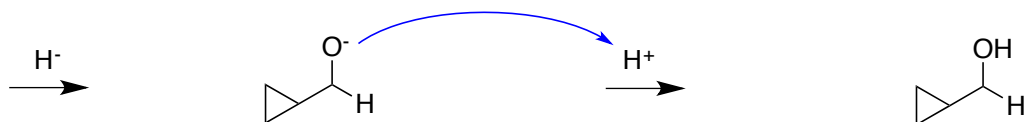
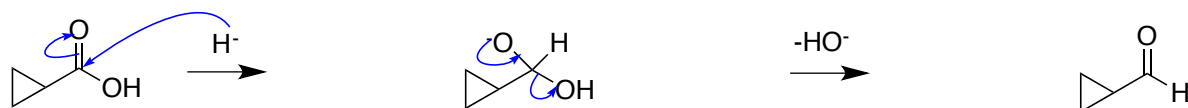


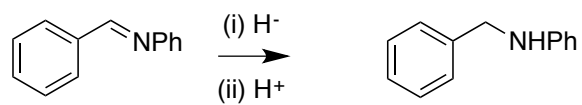
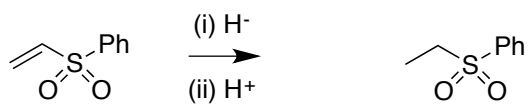
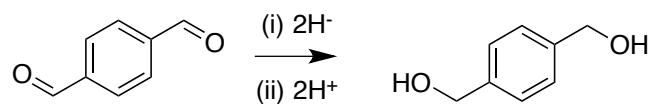
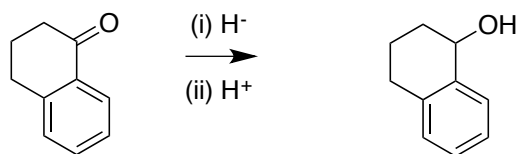
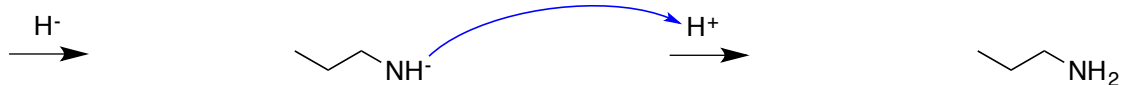
alkoxide



It takes 2

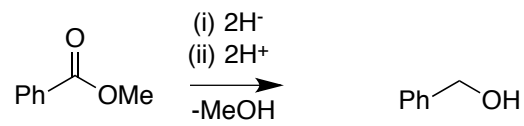
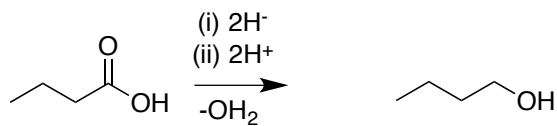
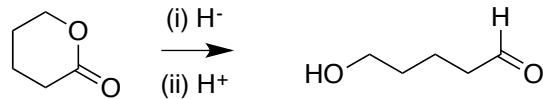
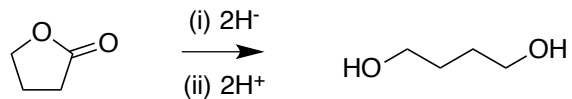
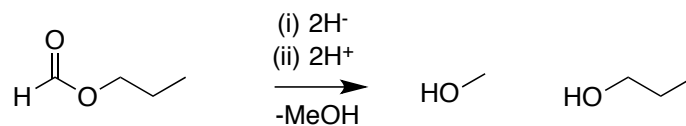
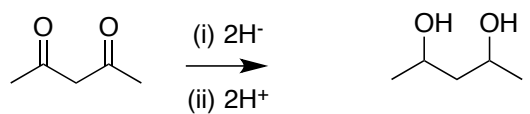
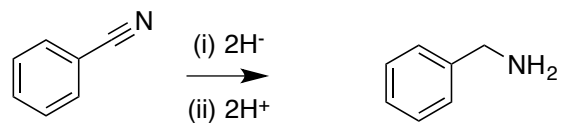
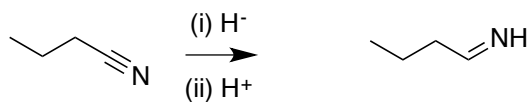
Two Step Reductions

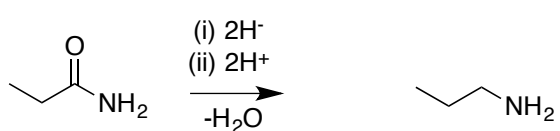
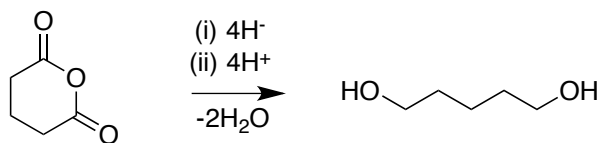
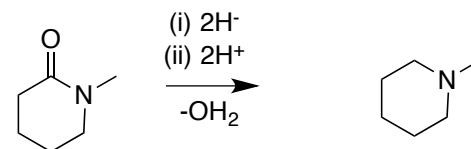
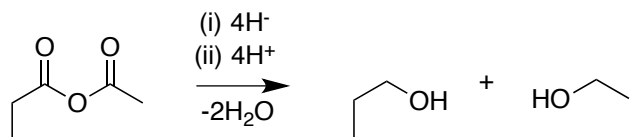
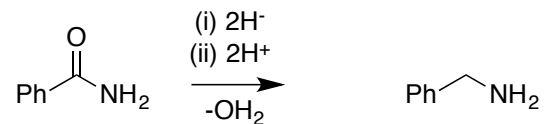
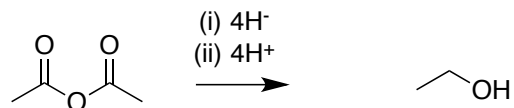
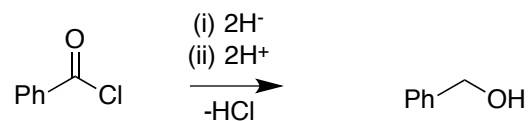
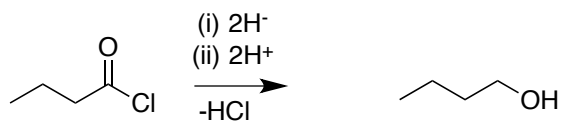
*alkoxide**alkoxide*



sulfone

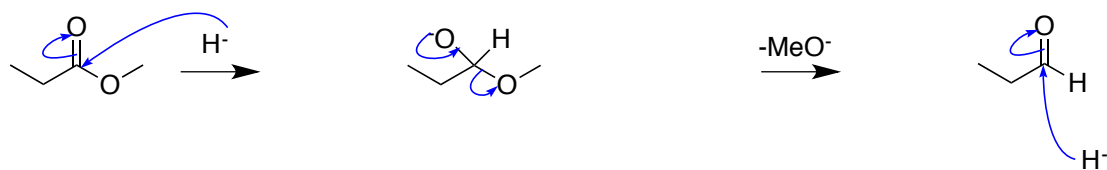
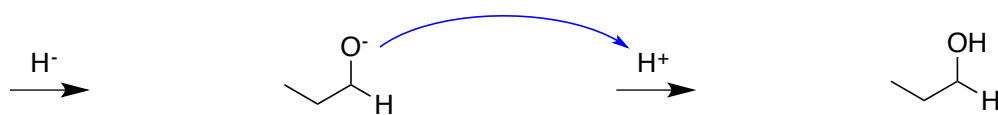
imine



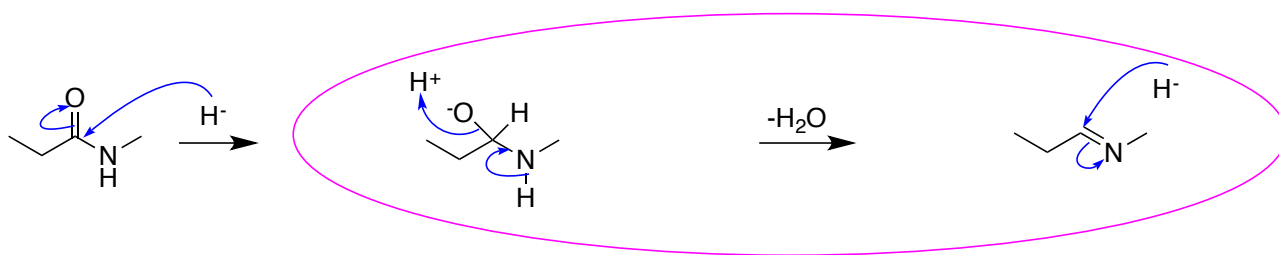
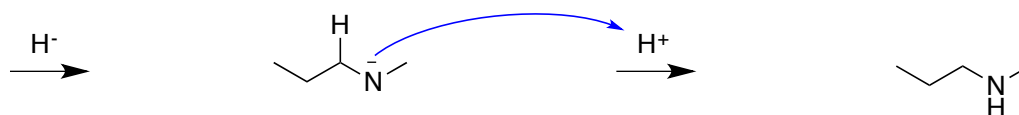


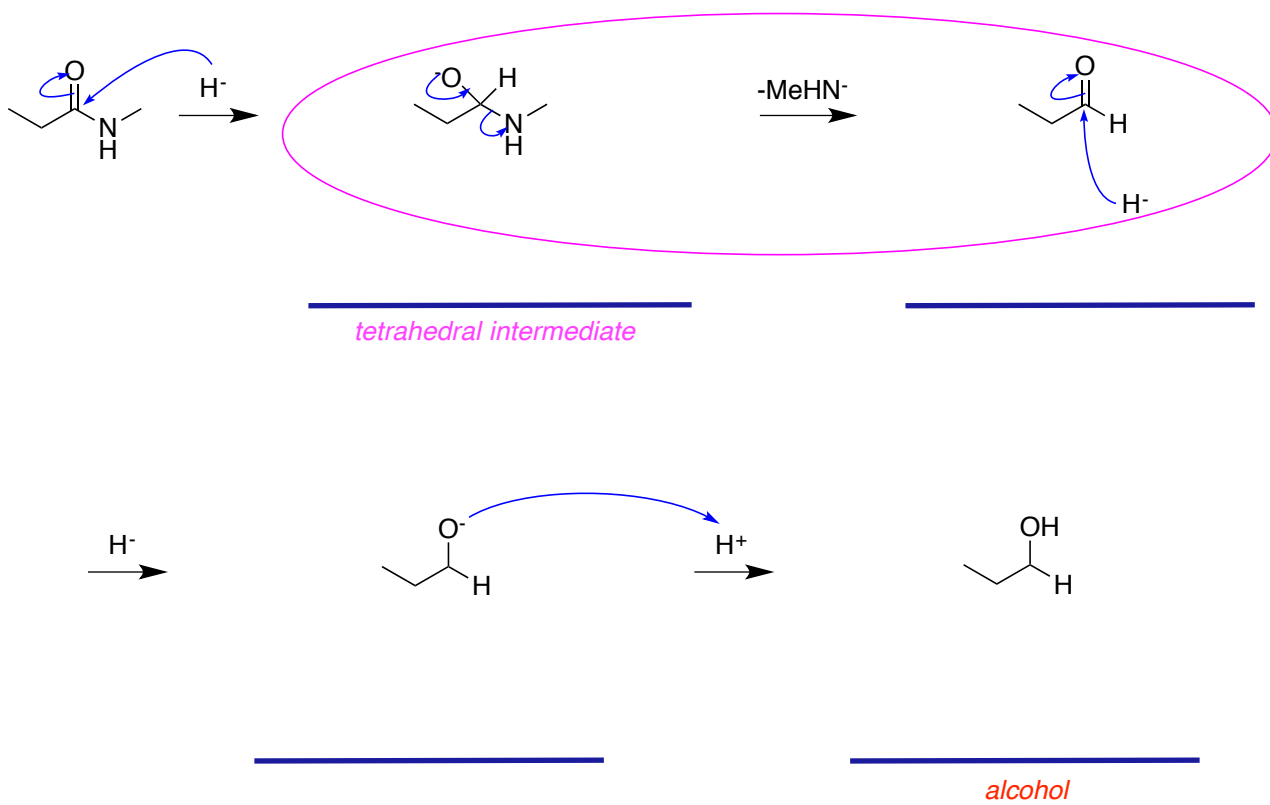
Difference Between Hydridic Reductions Of Amides And Esters

a

*tetrahedral intermediate**aldehyde**alkoxide*

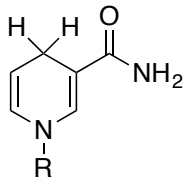
b

*tetrahedral intermediate**imine**amine*

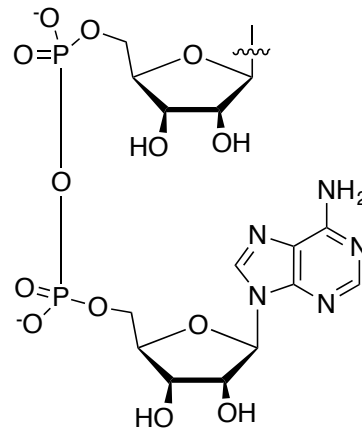
cmechanism **b**.

Because the amine anion is not a good leaving group.

D. NADH: A Hydride Source *In Vivo*



R =



NADH full name: Reduced nicotinamide adenine dinucleotide



*by-product full name:
Nicotinamide adenine
dinucleotide (NAD)*

is *NAD*.

