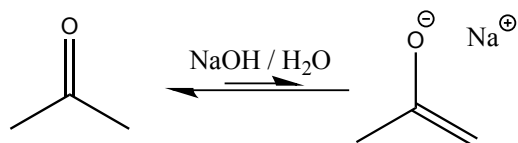
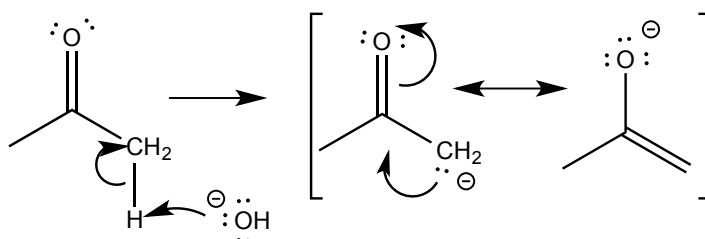


Formation of Enolates

Reaction:



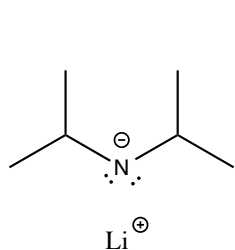
Mechanism:



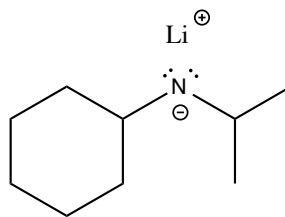
The enolate ion is resonance stabilized. The pK_a of a β-dicarbonyl compound is lower than for other dicarbonyl compounds. See table below.

Compound	Enolate	pK _a
		9
		11
		13
		16.7
		19.1
		25.6

For compounds whose pK_a is less than that of water, NaOH is a good enough base to make an appreciable amount of enolate. If the pK_a is higher than that of water then a stronger base is required to form the enolate. (See below are some bases used) Either of the bases are an appropriate because of their bulkiness acid-base reactions will not compete with nucleophilic additions.



lithium diisopropyl amide, LDA
 pK_a of conjugate acid is ≈ 36



lithium cyclohexylisopropylamide, LCHIA
 pK_a of conjugate acid is ≈ 36