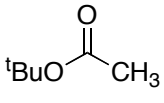
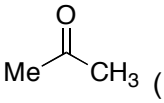
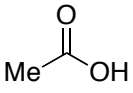
Chemistry 634: Advanced Organic Chemistry – Synthesis and Reactivity
Fall 2014, University of Delaware
Adapted from Prof. Donald Watson

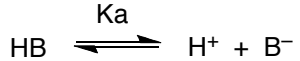
MUST KNOW pKa TABLE

(every organic chemist should know these)

compound	pKa (water)	pKa (DMSO)
tBu-H	53	
Me-H	48	56
Ph-H	43	
$PhCH_3$	41	43
H_2	~36	
iPr_2N-H		36 (THF)
NH_3	38	41
 (ester)	24.3	30.3
 (ketone)	~20	26.5
iPrOH	16.5	27.9
H_2O	15.7	32
Et_3N-H^+	10.8	9.0
 (carboxylic acid)	4.8	12.3
H_3O^+	–1.7	
HCl	–8.0	1.8

Recall:

pKa = -log (Ka)



the smaller the number, the more acidic

also pKa' is the acidity of the conjugate acid