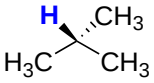
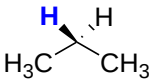
pK_a Values of Common Carbon Acids

Values in H_2O as much as possible, so common comparisons (i.e., H_2O pK_a = 15.7) can still be used

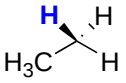
Note: Values in DMSO may be more valuable (http://www.chem.wisc.edu/areas/reich/pkatable/)



pK_a (53)?

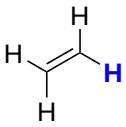


pK_a 51

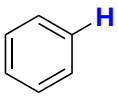


pK_a 50

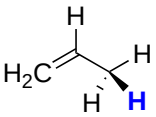
pK_a 48



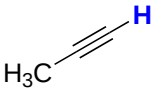
pK_a 44
alkene



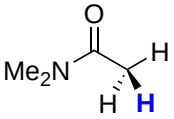
pK_a 43
arene



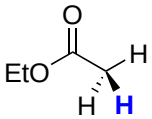
pK_a 42-43
allyl



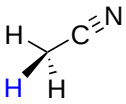
pK_a 25
terminal alkyne



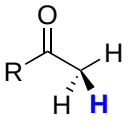
pK_a 25
amide



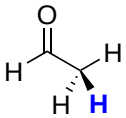
pK_a 25
ester



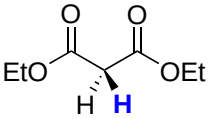
pK_a 25
nitrile



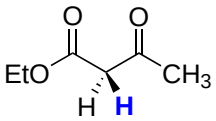
pK_a 20
ketone



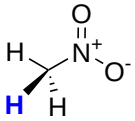
pK_a 14-17
aldehyde



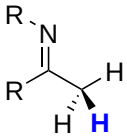
pK_a 13
β-diester



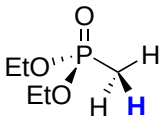
pK_a 11
β–keto ester



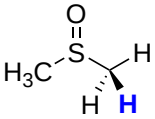
pK_a 10
nitroalkane



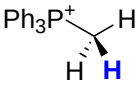
pK_a 30-33[CJC/83/61/2729]
imine



pK_a ~33[JOMC 86/312/283]
phosphonate ester



pK_a 32-33[JACS/67/89/5069]
pK_a 35 in DMSO
sulphoxide



pK_a ~13[TL/96/37/9047]
pK_a 22 in DMSO
phosphium salt