

## Approximate pKa chart of the functional groups: values to know

1. Protonated carbonyl pKa = **-7**
2. Protonated alcohol or ether pKa = **-2 to -3**
3. Carboxylic acid pKa = **4-5**
4. Ammonium ion pKa = **9-10**
5. Phenol pKa = **10**
6. Thiol pKa = **10**
7. Alcohol pKa = **16-18**
8. Water pKa = **15.7**
9. Amide pKa = **18**
10. Alpha proton of ketone/aldehyde pKa = **20**
11. Alpha proton of ester pKa = **25**
12. Terminal alkyne pKa = **25**
13. Amine pKa = **38-40**
14. Aromatic: Aryl **43**, benzylic **41**
15. Alkene: vinyl **45-50**; allylic **43**
16. Alkane pKa = **above 50**

Other important pKa's  
H<sub>2</sub> = **35**

Examples:

