

Brønsted-Lowry Acids and Bases

acid proton donor

base proton acceptor

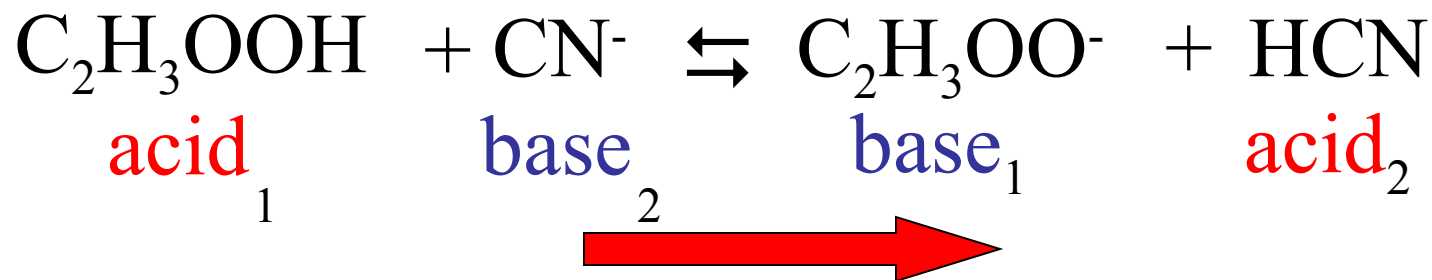


TABLE 14.2 Values of K_a for Some Common Monoprotic Acids

Formula	Name	Value of K_a^*
HSO_4^-	Hydrogen sulfate ion	1.2×10^{-2}
HClO_2	Chlorous acid	1.2×10^{-2}
$\text{HC}_2\text{H}_2\text{ClO}_2$	Monochloroacetic acid	1.35×10^{-3}
HF	Hydrofluoric acid	7.2×10^{-4}
HNO_2	Nitrous acid	4.0×10^{-4}
$\text{HC}_2\text{H}_3\text{O}_2$	Acetic acid	1.8×10^{-5}
$[\text{Al}(\text{H}_2\text{O})_6]^{3+}$	Hydrated aluminum(III) ion	1.4×10^{-5}
HOCl	Hypochlorous acid	3.5×10^{-8}
HCN	Hydrocyanic acid	6.2×10^{-10}
NH_4^+	Ammonium ion	5.6×10^{-10}
HOC_6H_5	Phenol	1.6×10^{-10}

↑
Increasing acid strength