

EQUILIBRIUM CONSTANTS

Acid-Ionization Constants, K_a , at 25°C.

Substance	Formula	K_a
Acetic acid	$\text{HC}_2\text{H}_3\text{O}_2$	1.7×10^{-5}
Benzoic acid	$\text{HC}_7\text{H}_5\text{O}_2$	6.3×10^{-5}
Boric acid	H_3BO_3	5.9×10^{-10}
Carbonic acid	H_2CO_3	4.3×10^{-7}
	HCO_3^-	4.8×10^{-11}
Chlorous acid	HClO_2	1.1×10^{-2}
Cyanic acid	HOCN	3.5×10^{-4}
Formic acid	HCHO_2	1.7×10^{-4}
Hydrocyanic acid	HCN	4.9×10^{-10}
Hydrofluoric acid	HF	6.8×10^{-4}
Hydrogen sulfate ion	HSO_4^-	1.1×10^{-2}
Hydrosulfuric acid	H_2S	8.9×10^{-8}
	HS^-	1.2×10^{-13}
Hypobromous acid	HBrO	2.1×10^{-9}
Hypochlorous acid	HClO	3.5×10^{-8}
Nitrous acid	HNO_2	4.5×10^{-4}
Oxalic acid	$\text{H}_2\text{C}_2\text{O}_4$	5.6×10^{-2}
	HC_2O_4^-	5.1×10^{-5}
Phosphoric acid	H_3PO_4	6.9×10^{-3}
	H_2PO_4^-	6.2×10^{-8}
	HPO_4^{2-}	4.8×10^{-13}
Phosphorous acid	H_3PO_3	1.6×10^{-2}
	H_2PO_3^-	7×10^{-7}
Propionic acid	$\text{HC}_3\text{H}_5\text{O}_2$	1.3×10^{-5}
Pyruvic acid	$\text{HC}_3\text{H}_3\text{O}_3$	1.4×10^{-4}
Sulfuric acid	H_2SO_4	strong
	HSO_4^-	1.3×10^{-2}
Sulfurous acid	H_2SO_3	1.3×10^{-2}
	HSO_3^-	6.3×10^{-8}

Base Ionization Constants, K_b , at 25°C.

Substance	Formula	K_b
Ammonia	NH_3	1.8×10^{-5}
Aniline	$\text{C}_6\text{H}_5\text{NH}_2$	4.2×10^{-10}
Dimethylamine	$(\text{CH}_3)_2\text{NH}$	5.1×10^{-4}
Ethylamine	$\text{C}_2\text{H}_5\text{NH}_2$	4.7×10^{-4}
Hydrazine	N_2H_4	1.7×10^{-6}
Hydroxylamine	NH_2OH	1.1×10^{-8}
Methylamine	CH_3NH_2	4.4×10^{-4}
Pyridine	$\text{C}_5\text{H}_5\text{N}$	1.4×10^{-9}
Urea	NH_2CONH_2	1.5×10^{-14}