

## EQUILIBRIUM CONSTANTS

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

Substance	Formula	$K_a$
Acetic acid	$\text{HC}_2\text{H}_3\text{O}_2$	$1.7 \times 10^{-5}$
Benzoic acid	$\text{HC}_7\text{H}_5\text{O}_2$	$6.3 \times 10^{-5}$
Boric acid	$\text{H}_3\text{BO}_3$	$5.9 \times 10^{-10}$
Carbonic acid	$\text{H}_2\text{CO}_3$	$4.3 \times 10^{-7}$
	$\text{HCO}_3^-$	$4.8 \times 10^{-11}$
Chlorous acid	$\text{HClO}_2$	$1.1 \times 10^{-2}$
Cyanic acid	$\text{HOCN}$	$3.5 \times 10^{-4}$
Formic acid	$\text{HCHO}_2$	$1.7 \times 10^{-4}$
Hydrocyanic acid	$\text{HCN}$	$4.9 \times 10^{-10}$
Hydrofluoric acid	$\text{HF}$	$6.8 \times 10^{-4}$
Hydrogen sulfate ion	$\text{HSO}_4^-$	$1.1 \times 10^{-2}$
Hydrosulfuric acid	$\text{H}_2\text{S}$	$8.9 \times 10^{-8}$
	$\text{HS}^-$	$1.2 \times 10^{-13}$
Hypobromous acid	$\text{HBrO}$	$2.1 \times 10^{-9}$
Hypochlorous acid	$\text{HClO}$	$3.5 \times 10^{-8}$
Nitrous acid	$\text{HNO}_2$	$4.5 \times 10^{-4}$
Oxalic acid	$\text{H}_2\text{C}_2\text{O}_4$	$5.6 \times 10^{-2}$
	$\text{HC}_2\text{O}_4^-$	$5.1 \times 10^{-5}$
Phosphoric acid	$\text{H}_3\text{PO}_4$	$6.9 \times 10^{-3}$
	$\text{H}_2\text{PO}_4^-$	$6.2 \times 10^{-8}$
	$\text{HPO}_4^{2-}$	$4.8 \times 10^{-13}$
Phosphorous acid	$\text{H}_3\text{PO}_3$	$1.6 \times 10^{-2}$
	$\text{H}_2\text{PO}_3^-$	$7 \times 10^{-7}$
Propionic acid	$\text{HC}_3\text{H}_5\text{O}_2$	$1.3 \times 10^{-5}$
Pyruvic acid	$\text{HC}_3\text{H}_3\text{O}_3$	$1.4 \times 10^{-4}$
Sulfuric acid	$\text{H}_2\text{SO}_4$	strong
	$\text{HSO}_4^-$	$1.3 \times 10^{-2}$
Sulfurous acid	$\text{H}_2\text{SO}_3$	$1.3 \times 10^{-2}$
	$\text{HSO}_3^-$	$6.3 \times 10^{-8}$

### Base Ionization Constants, $K_b$ , at 25°C.

Substance	Formula	$K_b$
Ammonia	$\text{NH}_3$	$1.8 \times 10^{-5}$
Aniline	$\text{C}_6\text{H}_5\text{NH}_2$	$4.2 \times 10^{-10}$
Dimethylamine	$(\text{CH}_3)_2\text{NH}$	$5.1 \times 10^{-4}$
Ethylamine	$\text{C}_2\text{H}_5\text{NH}_2$	$4.7 \times 10^{-4}$
Hydrazine	$\text{N}_2\text{H}_4$	$1.7 \times 10^{-6}$
Hydroxylamine	$\text{NH}_2\text{OH}$	$1.1 \times 10^{-8}$
Methylamine	$\text{CH}_3\text{NH}_2$	$4.4 \times 10^{-4}$
Pyridine	$\text{C}_5\text{H}_5\text{N}$	$1.4 \times 10^{-9}$
Urea	$\text{NH}_2\text{CONH}_2$	$1.5 \times 10^{-14}$