

# ACID-BASE TABLE

Acid Name	Conjugate Acid	$K_a$	$pK_a$	Conjugate Base	Base Name
perchloric acid	$\text{HClO}_4$	$\gg 1$	$< 0$	$\text{ClO}_4^{1-}$	perchlorate ion
hydrohalic acid	$\text{HX}$ (X = I, Br, Cl)	$\gg 1$	$< 0$	$\text{X}^{1-}$	halide ion
sulfuric acid	$\text{H}_2\text{SO}_4$	$\gg 1$	$< 0$	$\text{HSO}_4^{1-}$	hydrogen sulfate ion
nitric acid	$\text{HNO}_3$	$\gg 1$	$< 0$	$\text{NO}_3^{1-}$	nitrate ion
hydronium ion	$\text{H}_3\text{O}^{1+}$	1.0	0.00	$\text{H}_2\text{O}$	water
iodic acid	$\text{HIO}_3$	0.17	0.77	$\text{IO}_3^{1-}$	iodate ion
oxalic acid	$\text{H}_2\text{C}_2\text{O}_4$	$5.9 \times 10^{-2}$	1.23	$\text{HC}_2\text{O}_4^{1-}$	hydrogen oxalate ion
sulfurous acid	$\text{H}_2\text{SO}_3$	$1.5 \times 10^{-2}$	1.82	$\text{HSO}_3^{1-}$	hydrogen sulfite ion
hydrogen sulfate ion	$\text{HSO}_4^{1-}$	$1.2 \times 10^{-2}$	1.92	$\text{SO}_4^{2-}$	sulfate ion
phosphoric acid	$\text{H}_3\text{PO}_4$	$7.5 \times 10^{-3}$	2.12	$\text{H}_2\text{PO}_4^{1-}$	dihydrogen phosphate ion
hydrofluoric acid	$\text{HF}$	$7.2 \times 10^{-4}$	3.14	$\text{F}^{1-}$	fluoride ion
nitrous acid	$\text{HNO}_2$	$4.0 \times 10^{-4}$	3.40	$\text{NO}_2^{1-}$	nitrite ion
lactic acid	$\text{HC}_3\text{H}_5\text{O}_3$	$6.4 \times 10^{-5}$	3.85	$\text{C}_3\text{H}_5\text{O}_3^{1-}$	lactate ion
formic acid	$\text{HCHO}_2$	$1.8 \times 10^{-4}$	3.74	$\text{CHO}_2^{1-}$	formate ion
hydrogen oxalate ion	$\text{HC}_2\text{O}_4^{1-}$	$6.4 \times 10^{-5}$	4.19	$\text{C}_2\text{O}_4^{2-}$	oxalate ion
hydrazoic acid	$\text{HN}_3$	$1.9 \times 10^{-5}$	4.72	$\text{N}_3^{1-}$	azide ion
acetic acid	$\text{HC}_2\text{H}_3\text{O}_2$	$1.8 \times 10^{-5}$	4.74	$\text{C}_2\text{H}_3\text{O}_2^{1-}$	acetate ion
carbonic acid	$\text{H}_2\text{CO}_3$	$4.3 \times 10^{-7}$	6.37	$\text{HCO}_3^{1-}$	hydrogen carbonate ion
hydrogen sulfite ion	$\text{HSO}_3^{1-}$	$1.0 \times 10^{-7}$	7.00	$\text{SO}_3^{2-}$	sulfite ion
hydrosulfuric acid	$\text{H}_2\text{S}$	$1.0 \times 10^{-7}$	7.00	$\text{HS}^{1-}$	hydrogen sulfide ion
dihydrogen phosphate ion	$\text{H}_2\text{PO}_4^{1-}$	$6.2 \times 10^{-8}$	7.21	$\text{HPO}_4^{2-}$	hydrogen phosphate ion
hypochlorous acid	$\text{HClO}$	$3.5 \times 10^{-8}$	7.46	$\text{ClO}^{1-}$	hypochlorite ion
ammonium ion	$\text{NH}_4^{1+}$	$5.6 \times 10^{-10}$	9.25	$\text{NH}_3$	ammonia
hydrocyanic acid	$\text{HCN}$	$4.0 \times 10^{-10}$	9.40	$\text{CN}^{1-}$	cyanide ion
hydrogen carbonate ion	$\text{HCO}_3^{1-}$	$4.7 \times 10^{-11}$	10.33	$\text{CO}_3^{2-}$	carbonate ion
hydrogen phosphate ion	$\text{HPO}_4^{2-}$	$4.8 \times 10^{-13}$	12.32	$\text{PO}_4^{3-}$	phosphate ion
hydrogen sulfide ion	$\text{HS}^{1-}$	$1.3 \times 10^{-13}$	12.89	$\text{S}^{2-}$	sulfide ion
water	$\text{H}_2\text{O}$	$1.0 \times 10^{-14}$	14.00	$\text{OH}^{1-}$	hydroxide ion
ammonia	$\text{NH}_3$	$\ll 10^{-14}$		$\text{NH}_2^{1-}$	amide ion
hydroxide ion	$\text{OH}^{1-}$	$\ll 10^{-14}$		$\text{O}^{2-}$	oxide ion