

**Acid Dissociation Constants**  
(For polyprotic acids, these are the  $K_{a_1}$  values)

Acid	$K_a$ (at 25°C)
HI	$10^{11}$
HBr	$10^9$
HClO <sub>4</sub>	$10^7$
HCl	$10^7$
H <sub>2</sub> SO <sub>4</sub>	$10^3$
HNO <sub>3</sub>	20
H <sub>3</sub> O <sup>+</sup>	1
H <sub>2</sub> SO <sub>3</sub>	$1.5 \times 10^{-2}$
HSO <sub>4</sub> <sup>-</sup>	$1.2 \times 10^{-2}$
HClO <sub>2</sub>	$1.2 \times 10^{-2}$
HC <sub>2</sub> H <sub>2</sub> ClO <sub>2</sub>	$1.35 \times 10^{-3}$
H <sub>3</sub> PO <sub>4</sub>	$7.5 \times 10^{-3}$
HF	$7.2 \times 10^{-4}$
HNO <sub>2</sub>	$4.0 \times 10^{-4}$
HCO <sub>2</sub> H	$1.8 \times 10^{-4}$
HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	$1.8 \times 10^{-5}$
Al(H <sub>2</sub> O) <sub>6</sub> <sup>3+</sup>	$1.4 \times 10^{-5}$
H <sub>2</sub> CO <sub>3</sub>	$4.3 \times 10^{-7}$
HSO <sub>3</sub> <sup>-</sup>	$1.0 \times 10^{-7}$
H <sub>2</sub> S	$9.1 \times 10^{-8}$
HClO	$3.5 \times 10^{-8}$
HBrO	$2.0 \times 10^{-9}$
HCN	$6.2 \times 10^{-10}$
NH <sub>4</sub> <sup>+</sup>	$5.6 \times 10^{-10}$
HOC <sub>6</sub> H <sub>5</sub>	$1.6 \times 10^{-10}$
HCO <sub>3</sub> <sup>-</sup>	$4.8 \times 10^{-11}$
H <sub>2</sub> O <sub>2</sub>	$2.4 \times 10^{-12}$
H <sub>2</sub> O	$1.0 \times 10^{-14}$
CH <sub>3</sub> OH	$6.3 \times 10^{-16}$
H <sub>2</sub>	$\approx 10^{-35}$
NH <sub>3</sub>	$\approx 10^{-38}$
CH <sub>3</sub> CH <sub>3</sub>	$\approx 10^{-50}$