

**TABLE 2.3 Common Monatomic Cations and Anions**

Cation	Name	Anion	Name
H <sup>+</sup>	Hydrogen	H <sup>-</sup>	Hydride
Li <sup>+</sup>	Lithium	F <sup>-</sup>	Fluoride
Na <sup>+</sup>	Sodium	Cl <sup>-</sup>	Chloride
K <sup>+</sup>	Potassium	Br <sup>-</sup>	Bromide
Cs <sup>+</sup>	Cesium	I <sup>-</sup>	Iodide
Be <sup>2+</sup>	Beryllium	O <sup>2-</sup>	Oxide
Mg <sup>2+</sup>	Magnesium	S <sup>2-</sup>	Sulfide
Ca <sup>2+</sup>	Calcium	N <sup>3-</sup>	Nitride
Ba <sup>2+</sup>	Barium	P <sup>3-</sup>	Phosphide
Al <sup>3+</sup>	Aluminum		
Ag <sup>+</sup>	Silver		

**TABLE 2.4 Common Type II Cations**

Ion	Systematic Name
Fe <sup>3+</sup>	Iron(III)
Fe <sup>2+</sup>	Iron(II)
Cu <sup>2+</sup>	Copper(II)
Cu <sup>+</sup>	Copper(I)
Co <sup>3+</sup>	Cobalt(III)
Co <sup>2+</sup>	Cobalt(II)
Sn <sup>4+</sup>	Tin(IV)
Sn <sup>2+</sup>	Tin(II)
Pb <sup>4+</sup>	Lead(IV)
Pb <sup>2+</sup>	Lead(II)
Hg <sup>2+</sup>	Mercury(II)
Hg <sub>2</sub> <sup>2+*</sup>	Mercury(I)
Ag <sup>+</sup>	Silver†
Zn <sup>2+</sup>	Zinc†
Cd <sup>2+</sup>	Cadmium†

**TABLE 2.5 Common Polyatomic Ions**

Ion	Name	Ion	Name
Hg <sub>2</sub> <sup>2+</sup>	Mercury(I)	NCS <sup>-</sup>	Thiocyanate
NH <sub>4</sub> <sup>+</sup>	Ammonium	CO <sub>3</sub> <sup>2-</sup>	Carbonate
NO <sub>2</sub> <sup>-</sup>	Nitrite	HCO <sub>3</sub> <sup>-</sup>	Hydrogen carbonate (bicarbonate is a widely used common name)
NO <sub>3</sub> <sup>-</sup>	Nitrate	ClO <sup>-</sup>	Hypochlorite
SO <sub>3</sub> <sup>2-</sup>	Sulfite	ClO <sub>2</sub> <sup>-</sup>	Chlorite
SO <sub>4</sub> <sup>2-</sup>	Sulfate	ClO <sub>3</sub> <sup>-</sup>	Chlorate
HSO <sub>4</sub> <sup>-</sup>	Hydrogen sulfate (bisulfate is a widely used common name)	ClO <sub>4</sub> <sup>-</sup>	Perchlorate
OH <sup>-</sup>	Hydroxide	C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup>	Acetate
CN <sup>-</sup>	Cyanide	MnO <sub>4</sub> <sup>-</sup>	Permanganate
PO <sub>4</sub> <sup>3-</sup>	Phosphate	Cr <sub>2</sub> O <sub>7</sub> <sup>2-</sup>	Dichromate
HPO <sub>4</sub> <sup>2-</sup>	Hydrogen phosphate	CrO <sub>4</sub> <sup>2-</sup>	Chromate
H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>	Dihydrogen phosphate	O <sub>2</sub> <sup>2-</sup>	Peroxide
		C <sub>2</sub> O <sub>4</sub> <sup>2-</sup>	Oxalate

**TABLE 2.7 Names of Acids\* That Do Not Contain Oxygen**

Acid	Name
HF	Hydrofluoric acid
HCl	Hydrochloric acid
HBr	Hydrobromic acid
HI	Hydroiodic acid
HCN	Hydrocyanic acid
H <sub>2</sub> S	Hydrosulfuric acid

**TABLE 2.8 Names of Some Oxygen-Containing Acids**

Acid	Name
HNO <sub>3</sub>	Nitric acid
HNO <sub>2</sub>	Nitrous acid
H <sub>2</sub> SO <sub>4</sub>	Sulfuric acid
H <sub>2</sub> SO <sub>3</sub>	Sulfurous acid
H <sub>3</sub> PO <sub>4</sub>	Phosphoric acid
HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	Acetic Acid