

TABLE 6.7 Names and Formulas of Some Common Polyatomic Ions

Nonmetal	Formula of Ion*	Name of Ion
Hydrogen	$\text{OH}^-$	Hydroxide
Nitrogen	$\text{NH}_4^+$	Ammonium
	$\text{NO}_3^-$	<b>Nitrate</b>
	$\text{NO}_2^-$	Nitrite
Chlorine	$\text{ClO}_4^-$	Perchlorate
	$\text{ClO}_3^-$	<b>Chlorate</b>
	$\text{ClO}_2^-$	Chlorite
	$\text{ClO}^-$	Hypochlorite
Carbon	$\text{CO}_3^{2-}$	<b>Carbonate</b>
	$\text{HCO}_3^-$	Hydrogen carbonate (or bicarbonate)
	$\text{CN}^-$	Cyanide
	$\text{C}_2\text{H}_3\text{O}_2^-$	Acetate
	$\text{SCN}^-$	Thiocyanate
Sulfur	$\text{SO}_4^{2-}$	<b>Sulfate</b>
	$\text{HSO}_4^-$	Hydrogen sulfate (or bisulfate)
	$\text{SO}_3^{2-}$	Sulfite
	$\text{HSO}_3^-$	Hydrogen sulfite (or bisulfite)
Phosphorus	$\text{PO}_4^{3-}$	<b>Phosphate</b>
	$\text{HPO}_4^{2-}$	Hydrogen phosphate
	$\text{H}_2\text{PO}_4^-$	Dihydrogen phosphate
	$\text{PO}_3^{3-}$	Phosphite
Chromium	$\text{CrO}_4^{2-}$	<b>Chromate</b>
	$\text{Cr}_2\text{O}_7^{2-}$	Dichromate
Manganese	$\text{MnO}_4^-$	Permanganate

\*Formulas and names in bold show the most common polyatomic ion for that element.

TABLE 6.5 Some Metals That Form More Than One Positive Ion

Element	Ions	Name of Ion	Element	Ions	Name of Ion
Bismuth	$\text{Bi}^{3+}$	Bismuth(III)	Lead	$\text{Pb}^{2+}$	Lead(II)
	$\text{Bi}^{5+}$	Bismuth(V)		$\text{Pb}^{4+}$	Lead(IV)
Chromium	$\text{Cr}^{2+}$	Chromium(II)	Manganese	$\text{Mn}^{2+}$	Manganese(II)
	$\text{Cr}^{3+}$	Chromium(III)		$\text{Mn}^{3+}$	Manganese(III)
Cobalt	$\text{Co}^{2+}$	Cobalt(II)	Mercury	$\text{Hg}_2^{2+}$	Mercury(I)*
	$\text{Co}^{3+}$	Cobalt(III)		$\text{Hg}^{2+}$	Mercury(II)
Copper	$\text{Cu}^+$	Copper(I)	Nickel	$\text{Ni}^{2+}$	Nickel(II)
	$\text{Cu}^{2+}$	Copper(II)		$\text{Ni}^{3+}$	Nickel(III)
Gold	$\text{Au}^+$	Gold(I)	Tin	$\text{Sn}^{2+}$	Tin(II)
	$\text{Au}^{3+}$	Gold(III)		$\text{Sn}^{4+}$	Tin(IV)
Iron	$\text{Fe}^{2+}$	Iron(II)			
	$\text{Fe}^{3+}$	Iron(III)			

\*Mercury(I) ions form pairs with a 2+ charge.