

Common Polyatomic Ions

Grouped by charge. The charge belongs to the whole ion — it does not change when you build a formula. When you need more than one, wrap it in parentheses: $\text{Ca}(\text{NO}_3)_2$.

Charge 1-		1-
Acetate	$\text{C}_2\text{H}_3\text{O}_2^-$	
Hydrogen carbonate bicarbonate	HCO_3^-	
Hydrogen sulfate bisulfate	HSO_4^-	
Bromate	BrO_3^-	
Chlorate	ClO_3^-	
Chlorite	ClO_2^-	
Cyanide	CN^-	
Dihydrogen phosphate	H_2PO_4^-	
Hydroxide	OH^-	
Hypochlorite	ClO^-	
Iodate	IO_3^-	
Nitrate	NO_3^-	
Nitrite	NO_2^-	
Perchlorate	ClO_4^-	
Permanganate	MnO_4^-	
Thiocyanate	SCN^-	

Charge 1+		1+
Ammonium	NH_4^+	
Hydronium	H_3O^+	

Charge 2-		2-
Carbonate	CO_3^{2-}	
Chromate	CrO_4^{2-}	
Dichromate	$\text{Cr}_2\text{O}_7^{2-}$	
Hydrogen phosphate	HPO_4^{2-}	
Oxalate	$\text{C}_2\text{O}_4^{2-}$	
Peroxide	O_2^{2-}	
Silicate	SiO_3^{2-}	
Sulfate	SO_4^{2-}	
Sulfite	SO_3^{2-}	
Thiosulfate	$\text{S}_2\text{O}_3^{2-}$	

Charge 3-		3-
Borate	BO_3^{3-}	
Phosphate	PO_4^{3-}	
Phosphite	PO_3^{3-}	

i The -ate / -ite pattern. When one element pairs with oxygen, the everyday version ends in **-ate**. One fewer oxygen → **-ite**. Add the prefix **per-** for one more oxygen than -ate, and **hypo-** for one fewer than -ite. The charge stays the same across the whole ladder:

hypo**chlor**ite ClO^- → **chlor**ite ClO_2^- → **chlor**ate ClO_3^- → per**chlor**ate ClO_4^-