

# COMMON POLYATOMIC IONS

Nitrate  $\text{NO}_3^{1-}$   
nitrite  $\text{NO}_2^{1-}$

Sulfate  $\text{SO}_4^{2-}$   
sulfite  $\text{SO}_3^{2-}$

hydrogen sulfate  $\text{HSO}_4^{1-}$   
hydrogen sulfite  $\text{HSO}_3^{1-}$

Chlorate  $\text{ClO}_3^{1-}$   
perchlorate  $\text{ClO}_4^{1-}$   
chlorite  $\text{ClO}_2^{1-}$   
hypochlorite  $\text{ClO}^{1-}$

Carbonate  $\text{CO}_3^{2-}$   
hydrogen carbonate  $\text{HCO}_3^{1-}$

(F, Br, and I form oxyions  
in the same way as Cl)

Chromate  $\text{CrO}_4^{2-}$   
Dichromate  $\text{Cr}_2\text{O}_7^{2-}$   
Oxalate  $\text{C}_2\text{O}_4^{2-}$

*Memorize these 3:*  
2- Charge

Hydroxide  $\text{OH}^{1-}$   
Acetate  $\text{C}_2\text{H}_3\text{O}_2^{1-}$   
Permanganate  $\text{MnO}_4^{1-}$   
Cyanide  $\text{CN}^{1-}$   
Thiocyanate  $\text{SCN}^{1-}$

*Memorize  
these 5:*  
1- Charge

Phosphate  $\text{PO}_4^{3-}$   
phosphite  $\text{PO}_3^{3-}$   
hydrogen phosphate  $\text{HPO}_4^{2-}$   
hydrogen phosphite  $\text{HPO}_3^{2-}$   
dihydrogen phosphate  $\text{H}_2\text{PO}_4^{1-}$   
dihydrogen phosphite  $\text{H}_2\text{PO}_3^{1-}$

Ammonium  $\text{NH}_4^{1+}$   
Hydronium  $\text{H}_3\text{O}^{1+}$

*Memorize these 2:*  
1+ Charge

## COMMON VARIABLE CHARGE METAL IONS (ROMAN NUMERALS)

Cu } 1+, 2+  
I II

Pb }  
2+, 4+  
Sn } II IV

Fe }  
Co } 2+, 3+  
Ni } II III  
Cr }

Sb }  
3+, 5+  
Bi } III V