

## COMMON IONS

### CATIONS

#### Monoatomic Ions

##### Col.1 (+1) Wants to lose 1 electron

H<sup>+1</sup> hydrogen  
Li<sup>+1</sup> lithium  
Na<sup>+1</sup> sodium  
K<sup>+1</sup> potassium

##### Col.2 (+2) Wants to lose 2 electrons

Be<sup>+2</sup> beryllium  
Mg<sup>+2</sup> magnesium  
Ca<sup>+2</sup> calcium  
Sr<sup>+2</sup> strontium  
Ba<sup>+2</sup> barium

##### Col.13 (+3) Wants to lose 3 electrons

Al<sup>+3</sup> aluminum

##### Transition Metals with Roman Numerals that denote

###### Charge:

Co <sup>+2</sup> cobalt II	Co <sup>+3</sup> cobalt III
Cr <sup>+2</sup> chromium II	Cr <sup>+3</sup> chromium III
Cu <sup>+1</sup> copper I	Cu <sup>+2</sup> copper II

Fe <sup>+2</sup> iron II	Fe <sup>+3</sup> iron III
Pb <sup>+2</sup> lead II	Pb <sup>+4</sup> lead IV

etc.

Ag <sup>+1</sup> silver	
Zn <sup>+2</sup> zinc	
Hg <sub>2</sub> <sup>+2</sup> mercury I	Hg <sup>+2</sup> mercury II

#### Polyatomic Ions

**NH<sub>4</sub><sup>+1</sup> ammonium**

#### Acids (usually start with H)

CH<sub>3</sub>COOH or HC<sub>2</sub>H<sub>3</sub>O<sub>2</sub> acetic acid  
(COOH)<sub>2</sub> or H<sub>2</sub>C<sub>2</sub>O<sub>4</sub> oxalic acid  
H<sub>2</sub>CO<sub>3</sub> carbonic acid

HCl hydrochloric acid  
HClO<sub>4</sub> perchloric acid  
HNO<sub>3</sub> nitric acid

H<sub>2</sub>SO<sub>4</sub> sulfuric acid  
H<sub>3</sub>PO<sub>4</sub> phosphoric acid

### ANIONS

#### Monoatomic Ions

**(element names end in "ide", when 2nd name)**

##### Col.17 (-1) Wants to gain 1 electron

F<sup>-1</sup> fluoride  
Cl<sup>-1</sup> chloride  
Br<sup>-1</sup> bromide  
I<sup>-1</sup> iodide

##### Col.16 (-2) Wants to gain 2 electrons

O<sup>-2</sup> oxide  
S<sup>-2</sup> sulfide  
Se<sup>-2</sup> selenide

##### Col.15 (-3) Wants to gain 3 electrons

N<sup>-3</sup> nitride  
P<sup>-3</sup> phosphide

#### Polyatomic Ions

CH<sub>3</sub>COO<sup>-1</sup> or C<sub>2</sub>H<sub>3</sub>O<sub>2</sub><sup>-1</sup> acetate  
C<sub>2</sub>O<sub>4</sub><sup>-2</sup> oxalate  
**CO<sub>3</sub><sup>-2</sup> carbonate**

**ClO<sup>-1</sup> hypochlorite**  
**ClO<sub>2</sub><sup>-1</sup> chlorite**  
**ClO<sub>3</sub><sup>-1</sup> chlorate**  
**ClO<sub>4</sub><sup>-1</sup> perchlorate**

**CN<sup>-1</sup> cyanide**  
**CrO<sub>4</sub><sup>-2</sup> chromate**  
**Cr<sub>2</sub>O<sub>7</sub><sup>-2</sup> dichromate**

**HCO<sub>3</sub><sup>-1</sup> bicarbonate**  
**HSO<sub>4</sub><sup>-1</sup> bisulfate**  
(or hydrogen carbonate & hydrogen sulfate)

**MnO<sub>4</sub><sup>-1</sup> permanganate**  
**NO<sub>2</sub><sup>-1</sup> nitrite**  
**NO<sub>3</sub><sup>-1</sup> nitrate**

O<sub>2</sub><sup>-2</sup> peroxide (H<sub>2</sub>O<sub>2</sub> hydrogen peroxide)

**OH<sup>-1</sup> hydroxide**  
**PO<sub>4</sub><sup>-3</sup> phosphate**

**SO<sub>3</sub><sup>-2</sup> sulfite**  
**SO<sub>4</sub><sup>-2</sup> sulfate**