

## Common Cations

Ionic Charge +1		Ionic Charge +2		Ionic Charge +3	
<u>Alkali Metals (Group 1A)</u>		<u>Alkaline Earths (Group 2A)</u>		<u>Group 3A</u>	
Li <sup>+</sup>	Lithium	Be <sup>+2</sup>	Beryllium	Al <sup>+3</sup>	Aluminum
Na <sup>+</sup>	Sodium	Mg <sup>+2</sup>	Magnesium	Ga <sup>+3</sup>	Gallium
K <sup>+</sup>	Potassium	Ca <sup>+2</sup>	Calcium	<u>Transition Elements</u>	
Rb <sup>+</sup>	Rubidium	Sr <sup>+2</sup>	Strontium	Cr <sup>+3</sup>	Chromium(III)
Cs <sup>+</sup>	Cesium	Ba <sup>+2</sup>	Barium	Mn <sup>+3</sup>	Manganese(III)
<u>Transition Elements</u>		<u>Transition Elements</u>		Fe <sup>+3</sup>	Iron(III)
Cu <sup>+</sup>	Copper(I)	Cr <sup>+2</sup>	Chromium(II)	Co <sup>+3</sup>	Cobalt(III)
Ag <sup>+</sup>	Silver	Mn <sup>+2</sup>	Manganese(II)		
<u>Polyatomic Ions</u>		Fe <sup>+2</sup>	Iron(II)		
NH <sub>4</sub> <sup>+</sup>	Ammonium	Co <sup>+2</sup>	Cobalt(II)		
<u>Others</u>		Ni <sup>+2</sup>	Nickel		
H <sup>+</sup>	Hydrogen	Cu <sup>+2</sup>	Copper(II)		
H <sub>3</sub> O <sup>+</sup>	Hydronium <sup>a</sup>	Zn <sup>+2</sup>	Zinc		
		Cd <sup>+2</sup>	Cadmium		
		Hg <sub>2</sub> <sup>+2</sup>	Mercury(I) <sup>b</sup>		
		Hg <sup>+2</sup>	Mercury(II)		
		<u>Others</u>			
		Sn <sup>+2</sup>	Tin(II)		
		Pb <sup>+2</sup>	Lead(II)		

a: this is the species that actually exists when H<sup>+</sup> is present in water;

b: mercury(I) ions always occur bound together to form Hg<sub>2</sub><sup>+2</sup> ions;

c: Not included in the table are two common +4 ions: Pb<sup>+4</sup> = Lead(IV) and Sn<sup>+4</sup> = Tin(IV)

# Common Anions

Ionic Charge -1		Ionic Charge -2		Ionic Charge -3	
<u>Halogens (Group 7A)</u>		<u>Group 6A</u>		<u>Group 5A</u>	
F <sup>-</sup>	Fluoride	O <sup>-2</sup>	Oxide	N <sup>-3</sup>	Nitride
Cl <sup>-</sup>	Chloride	S <sup>-2</sup>	Sulfide	P <sup>-3</sup>	Phosphide
Br <sup>-</sup>	Bromide		<u>Oxyanions</u>		<u>Oxyanion</u>
I <sup>-</sup>	Iodide				
	<u>Acid Anions</u>				
HCO <sub>3</sub> <sup>-</sup>	Hydrogen carbonate <sup>a</sup>	CO <sub>3</sub> <sup>-2</sup>	Carbonate	PO <sub>4</sub> <sup>-3</sup>	Phosphate
HS <sup>-</sup>	Hydrogen sulfide	SO <sub>4</sub> <sup>-2</sup>	Sulfate		
HSO <sub>4</sub> <sup>-</sup>	Hydrogen sulfate	SO <sub>3</sub> <sup>-2</sup>	Sulfite		
HSO <sub>3</sub> <sup>-</sup>	Hydrogen sulfite	C <sub>2</sub> O <sub>4</sub> <sup>-2</sup>	Oxalate		
H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>	Dihydrogen phosphate	CrO <sub>4</sub> <sup>-2</sup>	Chromate		
	<u>Other Anions</u>	Cr <sub>2</sub> O <sub>7</sub> <sup>-2</sup>	Dichromate		
SCN <sup>-</sup>	Thiocyanate		<u>Acid Anion</u>		
CN <sup>-</sup>	Cyanide	HPO <sub>4</sub> <sup>-2</sup>	Hydrogen Phosphate		
H <sup>-</sup>	Hydride		<u>Diatomic Elemental</u>		
		O <sub>2</sub> <sup>-2</sup>	Peroxide		

a: Commonly referred to as Bicarbonate