

## CHEMISTRY 101 -Polyatomic Ions

### Cation

Ammonium (NH<sub>4</sub>)<sup>+</sup>

### Anions

Anion Name	Formula	Acid Formula	Acid Name
Acetate	(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sup>-</sup>	H(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> )	Acetic
Carbonate	(CO <sub>3</sub> ) <sup>2-</sup>	H <sub>2</sub> CO <sub>3</sub>	Carbonic
Chlorate	(ClO <sub>3</sub> ) <sup>-</sup>	HClO <sub>3</sub>	Chloric
Chlorite	(ClO <sub>2</sub> ) <sup>-</sup>	HClO <sub>2</sub>	Chlorous
Hydroxide	(OH) <sup>-</sup>	HOH (H <sub>2</sub> O)	Water
Nitrate	(NO <sub>3</sub> ) <sup>-</sup>	HNO <sub>3</sub>	Nitric
Nitrite	(NO <sub>2</sub> ) <sup>-</sup>	HNO <sub>2</sub>	Nitrous
Phosphate	(PO <sub>4</sub> ) <sup>3-</sup>	H <sub>3</sub> PO <sub>4</sub>	Phosphoric
Sulfate	(SO <sub>4</sub> ) <sup>2-</sup>	H <sub>2</sub> SO <sub>4</sub>	Sulfuric
Sulfite	(SO <sub>3</sub> ) <sup>2-</sup>	H <sub>2</sub> SO <sub>3</sub>	Sulfurous
Hydrogen carbonate	(HCO <sub>3</sub> ) <sup>-</sup>	(Also called Bicarbonate)	
Hydrogen sulfate	(HSO <sub>4</sub> ) <sup>-</sup>	(Also called Bisulfate)	

### Chemical Family

### Common Ionic Charge

Group I metals	+1
Group II metals	+2
Group III metals	+3
Group V nonmetals	-3
Group VI nonmetals	-2
Group VII nonmetals	-1

### Transition Metal Ions:

Fe <sup>2+</sup> , Fe <sup>3+</sup>	iron(II), iron(III)
Co <sup>2+</sup> , Co <sup>3+</sup>	cobalt(II), cobalt(III)
Cu <sup>+</sup> , Cu <sup>2+</sup>	copper(I), copper(II)
Sn <sup>2+</sup> , Sn <sup>4+</sup>	tin(II), tin(IV)
Pb <sup>2+</sup> , Pb <sup>4+</sup>	lead(II), lead(IV)
Hg <sup>+</sup> , Hg <sup>2+</sup>	mercury(I), mercury(II)
Ag <sup>+</sup>	silver
Zn <sup>2+</sup>	zinc
Ni <sup>2+</sup>	nickel

### Diatomic Molecules

H<sub>2</sub> O<sub>2</sub> N<sub>2</sub> F<sub>2</sub> Cl<sub>2</sub> Br<sub>2</sub> I<sub>2</sub>