

Revised August 2009

## HONORS Common Ions

CATIONS (+ve)			ANIONS (-ve)		
Name	Symbol/ Formula	Alternative*	Name	Symbol/ Formula	Alternative*
Aluminum	Al <sup>3+</sup>		Bromide	Br <sup>-</sup>	
Ammonium	NH <sub>4</sub> <sup>+</sup>		Bromate (I)	BrO <sup>-</sup>	<u>(Hypobromite)</u>
Arsenic (III)	As <sup>3+</sup>		Bromate (III)	BrO <sub>2</sub> <sup>-</sup>	<u>(Bromite)</u>
Arsenic (V)	As <sup>5+</sup>		Bromate (V)	BrO <sub>3</sub> <sup>-</sup>	<u>(Bromate)</u>
Barium	Ba <sup>2+</sup>		Bromate (VII)	BrO <sub>4</sub> <sup>-</sup>	<u>(Perbromate)</u>
Bismuth (III)	Bi <sup>3+</sup>		Carbonate	CO <sub>3</sub> <sup>2-</sup>	
Bismuth (V)	Bi <sup>5+</sup>		Chlorate (I)	ClO <sup>-</sup>	<u>(Hypochlorite)</u>
Cadmium	Cd <sup>2+</sup>		Chlorate (III)	ClO <sub>2</sub> <sup>-</sup>	<u>(Chlorite)</u>
Calcium	Ca <sup>2+</sup>		Chlorate (V)	ClO <sub>3</sub> <sup>-</sup>	<u>(Chlorate)</u>
Chromium (II)	Cr <sup>2+</sup>		Chlorate (VII)	ClO <sub>4</sub> <sup>-</sup>	<u>(Perchlorate)</u>
Chromium (III)	Cr <sup>3+</sup>		Chloride	Cl <sup>-</sup>	
Cobalt (II)	Co <sup>2+</sup>		Chromate	CrO <sub>4</sub> <sup>2-</sup>	
Cobalt (III)	Co <sup>3+</sup>		Cyanide	CN <sup>-</sup>	
<u>Copper (I)</u>	Cu <sup>+</sup>	(Cuprous)	Dichromate	Cr <sub>2</sub> O <sub>7</sub> <sup>2-</sup>	
<u>Copper (II)</u>	Cu <sup>2+</sup>	(Cupric)	Dihydrogen Phosphate	H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>	
Hydrogen	H <sup>+</sup>		Ethanoate	C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup>	<u>(Acetate)</u>
Hydronium	H <sub>3</sub> O <sup>+</sup>		Fluoride	F <sup>-</sup>	
<u>Iron (II)</u>	Fe <sup>2+</sup>	(Ferrous)	Hydride	H <sup>-</sup>	
<u>Iron (III)</u>	Fe <sup>3+</sup>	(Ferric)	<u>Hydrogen Carbonate</u>	HCO <sub>3</sub> <sup>-</sup>	(Bicarbonate)
<u>Lead (II)</u>	Pb <sup>2+</sup>	(Plumbous)	<u>Hydrogen Oxalate</u>	HC <sub>2</sub> O <sub>4</sub> <sup>-</sup>	(Binoxalate)
<u>Lead (IV)</u>	Pb <sup>4+</sup>	(Plumbic)	Hydrogen Phosphate	HPO <sub>4</sub> <sup>2-</sup>	
Lithium	Li <sup>+</sup>		<u>Hydrogen Sulfate</u>	HSO <sub>4</sub> <sup>-</sup>	(Bisulfate)
Magnesium	Mg <sup>2+</sup>		<u>Hydrogen Sulfide</u>	HS <sup>-</sup>	(Bisulfide)
Manganese (II)	Mn <sup>2+</sup>		<u>Hydrogen Sulfite</u>	HSO <sub>3</sub> <sup>-</sup>	(Bisulfite)
Manganese (IV)	Mn <sup>4+</sup>		Hydroxide	OH <sup>-</sup>	
<u>Mercury (I)</u>	Hg <sub>2</sub> <sup>2+</sup>	(Mercurous)	Iodate (I)	IO <sup>-</sup>	<u>(Hypoiodite)</u>
<u>Mercury (II)</u>	Hg <sup>2+</sup>	(Mercuric)	Iodate (III)	IO <sub>2</sub> <sup>-</sup>	<u>(Iodite)</u>
Nickel (II)	Ni <sup>2+</sup>		Iodate (V)	IO <sub>3</sub> <sup>-</sup>	<u>(Iodate)</u>
Potassium	K <sup>+</sup>		Iodate (VII)	IO <sub>4</sub> <sup>-</sup>	<u>(Periodate)</u>
Silver	Ag <sup>+</sup>		Iodide	I <sup>-</sup>	
Sodium	Na <sup>+</sup>		Manganate (VII)	MnO <sub>4</sub> <sup>-</sup>	<u>(Permanganate)</u>
Strontium	Sr <sup>2+</sup>		Nitrate	NO <sub>3</sub> <sup>-</sup>	
<u>Tin (II)</u>	Sn <sup>2+</sup>	(Stannous)	Nitride	N <sup>3-</sup>	
<u>Tin (IV)</u>	Sn <sup>4+</sup>	(Stannic)	Nitrite	NO <sub>2</sub> <sup>-</sup>	
Zinc	Zn <sup>2+</sup>		<u>Oxalate</u>	C <sub>2</sub> O <sub>4</sub> <sup>2-</sup>	(Ethandioate)
			Oxide	O <sup>2-</sup>	
			Peroxide	O <sub>2</sub> <sup>2-</sup>	
			Phosphate	PO <sub>4</sub> <sup>3-</sup>	
			Phosphide	P <sup>3-</sup>	
			Phosphite	PO <sub>3</sub> <sup>3-</sup>	
			Sulfate	SO <sub>4</sub> <sup>2-</sup>	
			Sulfide	S <sup>2-</sup>	
			Sulfite	SO <sub>3</sub> <sup>2-</sup>	
			Thiosulfate	S <sub>2</sub> O <sub>3</sub> <sup>2-</sup>	
			Thiocyanate	SCN <sup>-</sup>	

\* In the case of the cations, the alternative names are generally redundant in modern chemistry, but the anions *sometimes* use the alternate names. E.g. the oxyhalogen ions (bromate, chlorate, iodate etc.) are usually referred to by the alternate names, but HSO<sub>3</sub><sup>-</sup> is more commonly called Hydrogen Sulfite. In each case where two names are given, the more common one used in the United States is underlined.

Revised August 2009



**POLYATOMIC IONS**

<b>+2</b>	<b>+1</b>	<b>-1</b>	<b>-2</b>	<b>-3</b>
Hg <sub>2</sub> <sup>2+</sup>	NH <sub>4</sub> <sup>+</sup>	BrO <sup>-</sup>	CO <sub>3</sub> <sup>2-</sup>	PO <sub>3</sub> <sup>3-</sup>
		BrO <sub>2</sub> <sup>-</sup>	C <sub>2</sub> O <sub>4</sub> <sup>2-</sup>	PO <sub>4</sub> <sup>3-</sup>
		BrO <sub>3</sub> <sup>-</sup>	CrO <sub>4</sub> <sup>2-</sup>	
		BrO <sub>4</sub> <sup>-</sup>	Cr <sub>2</sub> O <sub>7</sub> <sup>2-</sup>	
		C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup>	HPO <sub>4</sub> <sup>2-</sup>	
		ClO <sup>-</sup>	SO <sub>3</sub> <sup>2-</sup>	
		ClO <sub>2</sub> <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	
		ClO <sub>3</sub> <sup>-</sup>	S <sub>2</sub> O <sub>3</sub> <sup>2-</sup>	
		ClO <sub>4</sub> <sup>-</sup>		
		CN <sup>-</sup>		
		HCO <sub>3</sub> <sup>-</sup>		
		HC <sub>2</sub> O <sub>4</sub> <sup>-</sup>		
		H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>		
		HS <sup>-</sup>		
		HSO <sub>3</sub> <sup>-</sup>		
		HSO <sub>4</sub> <sup>-</sup>		
		IO <sup>-</sup>		
		IO <sub>2</sub> <sup>-</sup>		
		IO <sub>3</sub> <sup>-</sup>		
		IO <sub>4</sub> <sup>-</sup>		
		MnO <sub>4</sub> <sup>-</sup>		
		NO <sub>2</sub> <sup>-</sup>		
		NO <sub>3</sub> <sup>-</sup>		
		OH <sup>-</sup>		
		SCN <sup>-</sup>		