

Inorganic Chemical Nomenclature

Chemistry 121: Basic Chemistry

All students completing Basic Chemistry should have these ion formulas and names memorized.

Binary Compound Names for Non-Metal Ions

H^{1-} hydride	N^{3-} nitride	O^{2-} oxide	F^{1-} fluoride
H^{1+} hydrogen	P^{3-} phosphide	S^{2-} sulfide	Cl^{1-} chloride
			Br^{1-} bromide
			I^{1-} iodide

Polyatomic Ions

NH_3	ammonia	CrO_4^{2-}	chromate	PO_4^{3-}	phosphate
NH_4^+	ammonium	$\text{Cr}_2\text{O}_7^{2-}$	dichromate	PO_3^{3-}	phosphite
H_3O^+	hydronium	CN^{1-}	cyanide	SO_4^{2-}	sulfate
$\text{CH}_3\text{COO}^{1-}$ ($\text{C}_2\text{H}_3\text{O}_2^{1-}$)	acetate	SCN^{1-}	thiocyanate	HSO_4^{1-}	hydrogen sulfate (bisulfate)
BrO_4^{1-}	perbromate	OH^{1-}	hydroxide	SO_3^{2-}	sulfite
BrO_3^{1-}	bromate	IO_4^{1-}	periodate	HSO_3^{1-}	hydrogen sulfite (bisulfite)
BrO_2^{1-}	bromite	IO_3^{1-}	iodate	$\text{S}_2\text{O}_3^{2-}$	thiosulfate
BrO^{1-}	hypobromite	IO_2^{1-}	iodite		
CO_3^{2-}	carbonate	IO^{1-}	hypoiodite		
HCO_3^{1-}	hydrogen carbonate (bicarbonate)	MnO_4^{1-}	permanganate		
ClO_4^{1-}	perchlorate	NO_3^{1-}	nitrate		
ClO_3^{1-}	chlorate	NO_2^{1-}	nitrite		
ClO_2^{1-}	chlorite	$\text{C}_2\text{O}_4^{2-}$	oxalate		
ClO^{1-}	hypochlorite	O_2^{2-}	peroxide		

Common Acid Names

$\text{HC}_2\text{H}_3\text{O}_2$	acetic acid	HNO_3	nitric acid
CH_3COOH	acetic acid	H_3PO_4	phosphoric acid
H_2CO_3	carbonic acid	H_2SO_4	sulfuric acid
HCl	hydrochloric acid		