

SYMBOLS AND CHARGES FOR MONATOMIC IONS

FIXED CHARGE

SYMBOL	NAME
1+	
H ⁺	Hydrogen
Li ⁺	Lithium
Na ⁺	Sodium
K ⁺	Potassium
Rb ⁺	Rubidium
Cs ⁺	Cesium
Ag ⁺	Silver
2+	
Be ²⁺	Beryllium
Mg ²⁺	Magnesium
Ca ²⁺	Calcium
Cd ²⁺	Cadmium
Sr ²⁺	Strontium
Ba ²⁺	Barium
Zn ²⁺	Zinc
3+	
Al ³⁺	Aluminum
Bi ³⁺	Bismuth
La ³⁺	Lanthanum

SYMBOL	NAME
1-	
H ⁻	Hydride
F ⁻	Fluoride
Cl ⁻	Chloride
Br ⁻	Bromide
I ⁻	Iodide
2-	
O ²⁻	Oxide
S ²⁻	Sulfide
Se ²⁻	Selenide
Te ²⁻	Telluride
3-	
N ³⁻	Nitride
P ³⁻	Phosphide
As ³⁻	Arsenide
4-	
C ⁴⁻	Carbide

NOTE that the letters in an ion's name before the **-ide** ending is the stem. For example, the stem for bromide is **brom-**.

SYMBOLS AND CHARGES FOR MONATOMIC IONS

VARIABLE CHARGE

Symbol	Systematic name		Symbol	Systematic name	
	Stock system	Common name		Stock system	Common name
Cr ²⁺	Chromium (II)	Chromous	Pb ⁴⁺	Lead (IV)	Plumbic
Cr ³⁺	Chromium (III)	Chromic	Mn ²⁺	Manganese (II)	Manganous
Co ²⁺	Cobalt (II)	Cobaltous	Mn ³⁺	Manganese (III)	Manganic
Co ³⁺	Cobalt (III)	Cobaltic	Hg ₂ ²⁺	Mercury (I)	Mercurous
Cu ⁺	Copper (I)	Cuprous	Hg ²⁺	Mercury (II)	Mercuric
Cu ²⁺	Copper (II)	Cupric	Ni ²⁺	Nickel (II)	Nickelous
Fe ²⁺	Iron (II)	Ferrous	Ni ³⁺	Nickel (III)	Nickelic
Fe ³⁺	Iron (III)	Ferric	Sn ²⁺	Tin (II)	Stannous
Au ⁺	Gold (I)	Aurous	Sn ⁴⁺	Tin (IV)	Stannic
Au ³⁺	Gold (III)	Auric	V ²⁺	Vanadium (II)	Vanadous
Pb ²⁺	Lead (II)	Plumbous	V ³⁺	Vanadium (III)	Vanadic

SYMBOLS AND CHARGES FOR POLYATOMIC IONS

Formula	Name
1+	
NH ₄ ⁺	Ammonium
1-	
C ₂ H ₃ O ₂ ⁻ or CH ₃ COO ⁻	Acetate
NH ₂ ⁻	Amide
N ₃ ⁻	Azide
BrO ₃ ⁻	Bromate
BrO ₂ ⁻	Bromite
BrO ⁻	Hypobromite
ClO ₄ ⁻	Perchlorate
ClO ₃ ⁻	Chlorate
ClO ₂ ⁻	Chlorite
ClO ⁻	Hypochlorite
CN ⁻	Cyanide
OCN ⁻	Cyanate
SCN ⁻	Thiocyanate
H ₂ PO ₄ ⁻	Dihydrogen phosphate
HCO ₃ ⁻	Hydrogen carbonate (bicarbonate)
HC ₂ O ₄ ⁻	Hydrogen oxalate (binoxalate)
HSO ₄ ⁻	Hydrogen sulfate (bisulfate)
HS ⁻	Hydrogen sulfide (bisulfide)
HSO ₃ ⁻	Hydrogen sulfite (bisulfite)
OH ⁻	Hydroxide
IO ₄ ⁻	Periodate
IO ₃ ⁻	Iodate
IO ₂ ⁻	Iodite
IO ⁻	Hypoiodite
NO ₃ ⁻	Nitrate
NO ₂ ⁻	Nitrite
MnO ₄ ⁻	Permanganate
VO ₃ ⁻	Vanadate

Formula	Name
2-	
CrO ₄ ²⁻	Chromate
CO ₃ ²⁻	Carbonate
Cr ₂ O ₇ ²⁻	Dichromate
SiF ₆ ²⁻	Hexafluorosilicate
HPO ₄ ²⁻	Hydrogen phosphate
NH ²⁻	Imide
C ₂ O ₄ ²⁻	Oxalate
O ₂ ²⁻	Peroxide
C ₈ H ₄ O ₄ ²⁻	Phthalate
SeO ₄ ²⁻	Selenate
SiO ₃ ²⁻	Silicate (metasilicate)
SO ₄ ²⁻	Sulfate
SO ₃ ²⁻	Sulfite
C ₄ H ₄ O ₆ ²⁻	Tartrate
B ₄ O ₇ ²⁻	Tetraborate
S ₂ O ₃ ²⁻	Thiosulfate
S ₂ O ₈ ²⁻	Peroxydisulfate
TeO ₄ ²⁻	Tellurate
WO ₄ ²⁻	Tungstate
ZnO ₂ ²⁻	Zincate
3-	
AlO ₃ ³⁻	Aluminate
AsO ₄ ³⁻	Arsenate
BO ₃ ³⁻	Borate
PO ₄ ³⁻	Phosphate
PO ₃ ³⁻	Phosphite
C ₆ H ₅ O ₇ ³⁻	Citrate
4-	
SiO ₄ ⁴⁻	Orthosilicate
P ₄ O ₇ ⁴⁻	Pyrophosphate

Note: Writing just the plus sign or minus sign for ions with 1⁺ or 1⁻ charges are acceptable.

PREFIXES USED FOR NAMING COVALENT COMPOUNDS:

mono = 1	penta = 5	nona = 9
di = 2	hexa = 6	deca = 10
tri = 3	hepta = 7	
tetra = 4	octa = 8	

NAMING ACIDS:

ANION	ACID
- ate	- ic acid
- ite	- ous acid
- ide	Hydro - ic acid