

Ionic Compounds

- Cation has single charge: 1A & 2A Groups, NH_4^+ , Al^{3+} , Ag^+ , Cd^{2+} , Zn^{2+}
 - Anion is monoatomic *(name of cation) + (name of anion)(ide)*
 NaCl sodium chloride
 - Anion is polyatomic *(name of cation) + (name of anion)*
 KNO_3 potassium nitrate
- Cation can have multiple charges B Group metals,
 - Anion is monoatomic *(name of cation) + (charge of cation in roman num.) (name of anion)(ide)*
 MnO manganese (II) oxide
 - Anion is polyatomic *(name of cation) + (charge of cation in roman num.) (name of anion)*
 $\text{Cu}(\text{OH})_2$ copper (II) hydroxide

Molecular Compounds

(latin #)+(name of cation)+(latin #) + (name of anion)(ide)
 CO carbon monoxide CO_2 carbon dioxide

Acids

- Acids without oxygen *(hydro) + (name of anion)(ic) acid*
 HCl hydrochloric acid
- Oxoacids
+O *(per)+(name of anion)(ic) acid*
(name of anion)(ic) acid
-O *(name of anion)(ous) acid*
-2O *(hypo)(name of anion)(ous) acid*

HClO_4 perchloric acid
 HClO_3 chloric acid
 HClO_2 chlorous acid
 HClO hypochlorous acid

H_2SO_5 persulfuric acid
 H_2SO_4 sulfuric acid
 H_2SO_3 sulfurous acid
 H_2SO_2 hyposulfurous acid

H_3PO_5 perphosphoric acid
 H_3PO_4 phosphoric acid
 H_3PO_3 phosphorous acid
 H_3PO_2 hypophosphorous acid

Bases

(name of cation) + (name of anion)
 NaOH sodium hydroxide $\text{Ba}(\text{OH})_2$ barium hydroxide

Organic Compounds

(name of root) + (name of functional group)
 CH_3OH methyl alcohol or methanol $\text{C}_2\text{H}_5\text{-NH}_2$ ethyl amine

Monoatomic Cations

K^+	potassium ion
Na^+	sodium ion
Mg^{2+}	magnesium ion
Al^{3+}	aluminum ion
Fe^{2+}	iron(II)
Fe^{3+}	iron(III)
Cu^+	copper (I)
Cu^{2+}	copper (II)
Hg^{2+}	mercury (II)
Sn^{2+}	tin(II)
Sn^{4+}	tin(IV)
Mn^{2+}	manganese (II)
Mn^{3+}	manganese (III)
Mn^{4+}	manganese (IV)

Polyatomic Cations

Hg_2^{2+}	mercury (I)
NH_4^+	ammonium

Monoatomic Anions

C^{4-}	carbide
Si^{4-}	silicide
N^{3-}	nitride
P^{3-}	phosphide
O^{2-}	oxide
S^{2-}	sulfide
F^-	fluoride
Cl^-	chloride
I^-	iodide
Br^-	bromide
H^-	hydride

Polyatomic Anions

CrO_4^{2-}	chromate
$Cr_2O_7^{2-}$	dichromate
CN^-	cyanide
PO_4^{3-}	phosphate
HPO_4^{2-}	hydrogen phosphate
$H_2PO_4^-$	dihydrogen phosphate
CO_3^{2-}	carbonate
	H_2CO_3 : carbonic acid
HCO_3^-	hydrogen carbonate
	Bicarbonate
SO_4^{2-}	sulfate
SO_3^{2-}	sulfite
HSO_4^-	hydrogen sulfate
ClO_3^-	chlorate
ClO_4^-	perchlorate
ClO_2^-	chlorite
ClO^-	hypochlorite
NO_3^-	nitrate
	HNO_3 : nitric acid
NO_2^-	nitrite
O_2^{2-}	peroxide
MnO_4^-	permanganate
SCN^-	thiocyanide
OH^-	hydroxide

Exceptions

B_2H_6	borane
CH_4	methane
SiH_4	silane
NH_3	ammonia
PH_3	phosphine
H_2O	water
H_2S	hydrogen sulfide