

Ionic compounds consist of **cations (positive ions)** and **anions (negative ions)**. The nomenclature, or naming, of ionic compounds is based on the names of the component ions. Here are the principal naming conventions for ionic compounds, along with examples to show how they are used:

a) [blah blah]-ide

The -ide ending is added to the name of a monoatomic ion of an element. For example;

H^- is then Hydride

F^- is then Fluoride

O_2^- is then Oxide

S_2^- is then Sulfide

N_3^- is then Nitride

P_3^- is then Phosphide

b) [blah blah]-ite and [blah blah]-ate

Some polyatomic anions (-) contain oxygen. These anions are called oxyanions. When an element forms two oxyanions, the one with less oxygen is given a name ending in -ite and the one with more oxygen is given a name that ends in -ate. For example;

NO_2^- is then Nitrite

NO_3^- is then Nitrate

SO_3^{2-} is then Sulfite

SO_4^{2-} is then Sulfate

c) [blah blah]-ous and [blah blah]-ic

The endings -ous or -ic are added to the Latin name of the element (e.g., stannous/stannic for tin) to represent the ions with lesser or greater charge, respectively. For example;

Fe^{2+} is then Ferrous

Fe^{3+} is then Ferric

Cu^+ is then Cuprous

Cu^{2+} is then Cupric

d) hypo-[blah blah] and per-[blah blah]

In the case where there is a series of four oxyanions, the hypo- and per- prefixes are used in conjunction with the -ite and -ate suffixes. The hypo- and per- prefixes indicate less oxygen and more oxygen, respectively. For example;

ClO^- is then Hypochlorite

ClO_2^- is then Chlorite

ClO_3^- is then Chlorate

ClO_4^- is then Perchlorate

e) bi-[blah blah] and di-hydrogen [blah blah]

Polyatomic anions sometimes gain one or more H^+ ions to form anions of a lower charge. These ions are named by adding the word hydrogen or dihydrogen in front of the name of the anion. It is still common to see and use the older naming convention in which the prefix bi- is used to indicate the addition of a single hydrogen ion. For example;

HCO_3^- is then Hydrogen carbonate or bicarbonate

HSO_4^- is then Hydrogen sulfate or bisulfate

H_2PO_4^- is then Dihydrogen phosphate