

IONIC COMPOUNDS

Ionic compounds form when atoms lose or gain electrons. Ions combine with other ions of opposite charge to form compounds. Compounds are always composed of atoms of at least two different elements.

A. Formation

If an atom loses one electron, the resulting ion has a single positive charge ($1+$). If it loses two electrons, the resulting ion has two positive charges ($2+$). If an atom gains one electron, the resulting ion has a single negative charge ($1-$). If it gains two electrons, the resulting ion has two negative charges ($2-$).

Using the list given in the table below, write the chemical formula for each compound. One has been done for you. Use these two rules to write the formulas.

1. The total number of negative charges must equal the total number of positive charges in a compound.

2. The positive ion is always written first.

Form $1+$ ions	Form $2+$ ions	Form $1-$ ions	Form $2-$ ions
H (hydrogen) Li (lithium) Na (sodium) K (potassium)	Be (beryllium) Mg (magnesium) Ca (Calcium)	F (fluorine) Cl (chlorine) Br (bromine) I (iodine)	O (oxygen) S (sulfur) Se (selenium)

LiCl

Lithium chloride

Magnesium fluoride

Sodium chloride

Potassium sulfide

Calcium oxide

Beryllium iodide

Hydrogen bromide

Sodium fluoride

1. When there is more than one of a particular atom in a molecule, how do you indicate it? _____

2. Name these compounds. Notice the endings of the names for the negative ions in the compounds above.

CaBr_2

Na_2S

MgO

LiF