

NAMING IONIC COMPOUNDS

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- _____ Compounds -
compounds composed of ____ different ions

(one metal " _____ "
and
one nonmetal " _____ ")

Binary
means
composed of

NAMING IONIC COMPOUNDS

There are a few general rules that apply when naming ionic compounds.

- Most ionic compounds are also called _____.
- The cation (positive ion) is written _____ followed by the anion (negative ion).
(You may want to memorize the individual cations and anions to make things easier.)
- The overall charge of the compound should add up to _____.

Nomenclature of binary ionic compounds

Notice that the anion always ends in - _____

Symbol	Element	Root	Anion Symbol	Anion Name
Br	Bromine	Brom	Br ⁻¹	Bromide
Cl	Chlorine	Chlor	Cl ⁻¹	Chloride
F	Fluorine	Fluor	F ⁻¹	Fluoride
H	Hydrogen	Hydr	H ⁻¹	Hydride
I	Iodine	Iod	I ⁻¹	Iodide
N	Nitrogen	Nitr	N ⁻³	Nitride
O	Oxygen	Ox	O ⁻²	Oxide
P	Phosphorus	Phosph	P ⁻³	Phosphide
S	Sulfur	Sulf	S ⁻²	Sulfide

Nomenclature of binary ionic compounds

Name the following compounds.

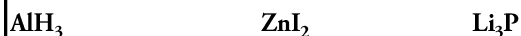


Nomenclature of binary ionic compounds

- Notice that the cation is always mentioned _____ and then the anion.
- Notice that the anion always ends in - _____
- Notice that the _____ of elements in the compound is *NOT* mentioned in the name.

Practice

Name the following ionic compounds:

**NAMING IONIC COMPOUNDS**

Polyatomic Compounds -compounds composed of more than _____ different ions (one metal and one nonmetal) .

The prefix
poly-means

Polyatomic Ions are a unit with a _____.

Write them and treat them as _____.

_____.

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Some common polyatomic anions:

 NO_3^{-1} = nitrate NO_2^{-1} = nitrite SO_4^{2-} = sulfate SO_3^{2-} = sulfite PO_4^{3-} = phosphate PO_3^{3-} = phosphite CO_3^{2-} = carbonate HCO_3^{-1} = hydrogen carbonate or bicarbonate OH^{-1} = hydroxide CN^{-1} = cyanide $\text{C}_2\text{H}_3\text{O}_2^{-}$ = acetate $\text{C}_2\text{O}_4^{2-}$ = oxalate**Nomenclature of polyatomic compounds**

Naming polyatomic compounds is similar to naming binary compounds.

- First write the cation (metal name) then the anion (polyatomic name).
- Polyatomic ions _____ their name .
- *DO NOT* change the ending to -ide.

Nomenclature of polyatomic compounds

Name the following compounds.

 NaOH $\text{Ba}(\text{NO}_3)_2$ H_2SO_4 CsNO_2

Sometimes there is a common name:

 KHCO_3 **Practice**

Name the following ionic compounds:

 K_2SO_3 MgSO_4 KCN MgCO_3 $\text{Ca}(\text{OH})_2$ NH_4NO_3 $\text{Zn}(\text{NO}_3)_2$ Li_3PO_4 NaNO_3