

Rules Page

Identifying the type of compound being named:

Ionic compounds

- 1) the compound must contain a metal ion or the ammonium ion (NH_4^+)
- 2) the compound must be neutral (have an overall charge of 0)

Molecular compounds

- 1) the compound must contain only nonmetal elements (no ions!)
- 2) the compound must be neutral (have an overall charge of 0)

Acids

- 1) the compound formula must begin with at least one hydrogen
- 2) the compound formula must have a subscript (aq) after it
- 3) the compound must be neutral (have an overall charge of 0)

Writing the name or formula for a compound:

Name to formula for MOLECULAR compounds

- 1): Write the symbol and the subscript for the first element
- 2): Write the symbol and the subscript for the second element

Formula to name for MOLECULAR compounds

- 1): Write the prefix and name for the element (make no changes to the name of the element)
- 2): Write the prefix and name for the second element (change the end of the name of the element to -ide)

Name to formula for ACIDS

acid name	anion name
hydrostemic acid	stemide
stemous acid	stemite
stemic acid	stematic

- 1): Write the symbol for the anion based on the above relationships
- 2): Balance the anion charge by adding hydrogen(s) in front and add (aq) to the end. (the anion charge = # of hydrogens needed)

Formula to name for ACIDS

- 1): Name the anion based on the above relationships
- 2): Change the ending of the anion name (add the prefix "hydro" if the anion ends with "ide") and add the word acid

Name to formula for IONIC compounds

- 1): Write the symbol for each ion.
- 2): Find the LCM of the two charges and use it to determine how many cations and how many anions you need in the formula.

$$\frac{\text{LCM}}{\text{charge of cation}} = \# \text{ of cations}$$

$$\frac{\text{LCM}}{\text{charge of anion}} = \# \text{ of anions}$$

- 3): Write the formula for the compound:

Formula to name for IONIC compounds

- 1): Name the cation.
 - 1a): If the cation is a VOS metal you need to include the **roman numeral for the charge in the cation** name.
- 2): Add the name of the anion.

$$(\# \text{ of cations}) \cdot (\text{cation charge}) + (\# \text{ of anions}) \cdot (\text{anion charge}) = 0$$