Naming and Writing Formulas for Acids and Bases

An **acid** is a compound that contains one or more hydrogen atoms and produces hydrogen ions (H^+) when dissolved in water.

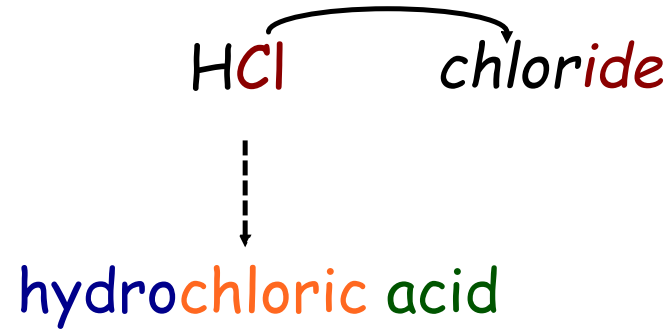
When naming an acid, we can consider the acid to consist of an anion combined with as many hydrogen ions as are needed to make the molecule electrically neutral.

The chemical formulas of acids are in the general form H_nX where X is a monatomic or polyatomic anion and *n* indicates how many hydrogens there are.

The rules for writing acids

1. When the name of anion (X) ends in "ide", the acid name begins with the prefix hydro-. The stem of the anion has the suffix -ic and is followed by the word "acid"

Example:



2. When the anion name ends in "ite", the acid name is the stem of the anion with the suffix "ous", followed by the word *acid*

Example: H_2SO_3 *sulfite*

sulfurous acid

3. When the anion name ends in "ate", the acid name is the stem of the anion with the suffix "ic" followed by the word *acid*

Example: HNO_3 *nitrate*

nitric acid

There is a summary table of these rules on the top of page 272.

Writing Formulas for Acids

Use the rules for writing the names of acids in reverse to write the formulas for acids.

Example: What is the formula for hydrobromic acid?

Example: What is the formula of phosphorous acid

Names and Formulas of Bases

A **base** is a ionic compound that produces hydroxide ions when dissolved in water.

Bases are named the same way ionic compounds are named, the name of the cation followed by the name of the anion (ending in 'ide')

Try questions on

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