

How to Name Acids

Acids release hydrogen ions when dissolved in water. Hydrogen (H) is usually the first element noted in a formula for an acid. Next noted are the one or two nonmetal elements in the acid. It's usually a pretty straight forward process to name or recognize the name or symbols for acids, but read on for a little extra detail on the subject.

Instructions

1. Note that some molecular compounds use the same element symbols even though one may be an acid, and the other may be a gas. For instance, HCl can be either a gas or an acid. So, name acids by writing the notations of (g) for gas after the formula, like HCl(g), for instance.
2. See how HCl(g) represents the hydrochloride gas and HCl(aq) is the acid. The difference is noted by (g) or (aq). In water, the HCl(aq) forms H⁺(aq) and Cl⁻(aq) ions.
3. Write and name acids with H, hydrogen, as the first element.
4. Know that two kinds of acids exist, binary acids and oxyacids. The binary acids contain only two elements, hydrogen and a nonmetal. Oxyacids contain hydrogen and an oxyanion (an anion that contains a nonmetal and oxygen).
5. Name binary acids like this: hydro + the base name of the nonmetal then ic + acid, as in hydrochloric acid for HCl(aq).
6. Use the same pattern for oxyacids, as for binary acids--note hydrogen first in the formula. Use a chemistry table of polyatomic ions to find the names of common oxyanions to write the formulas.
7. Practice your new skills by writing acids that are oxyanions ending in "ate" with the base name of oxyanion then ic + acid. Name oxyanions ending in "ite:" base name of oxyanion then ous + acid. Examples: HNO₃(aq) is nitric acid, and H₂SO₃(aq) is sulfurous acid.