**Naming Binary and Ternary Acids and Their Salts**

**Ionic** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ transfer of electrons therefore \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Covalent** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sharing of electrons therefore \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Polar Covalent** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but unequal sharing of electrons therefore

**To be memorized!**



**Remember: Acids** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ e.g. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

To be named as **acids** hydrogen compounds must be **aqueous** solutions.

Hydrogen cpds are named as if they were group 1A ionic compounds even

though they are **polar covalent** compounds.

 e.g. HCl(g) is hydrogen chloride and **NOT** hydrogen monochloride!

e.g. H2S(g) is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Binary Acids** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

When the **anion** does not contain oxygen the acid is a **Binary** acid.

e.g. HCl, HBr

Use the prefix **Hydro** plus the root of the anion’s name plus the **IC** ending—“shorter acid longer name”

e.g. HCl(aq) hydrochloric acid

 HBr(aq) hydrobromic acid

**Ternary Acids**

When the anion contains oxygen it is a **Ternary** acid—an **Oxy-Acid**.

**Do Not** use the prefix hydro!

The name depends on the name of the **polyatomic anion**.

The name depends on the number of oxygen atoms in the polyatomic ion.

The **prefices** and **suffices** are:

**ACIDS—H-NM** **SALTS—M-NM NUMBER OF OXYGENS**

PER IC PER ATE 1 MORE OXYGEN

IC ATE STANDARD NUMBER

OUS ITE 1 LESS OXYGEN

HYPO OUS HYPO ITE 2 LESS OXYGEN

You must know the Standard IC oxy-acids by heart before you can start manipulating the prefices and suffices.

e.g. HClO3 is chloric acid. There are 3 oxygen in the standard IC acid.