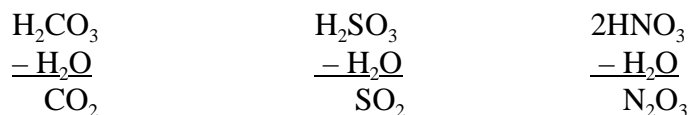


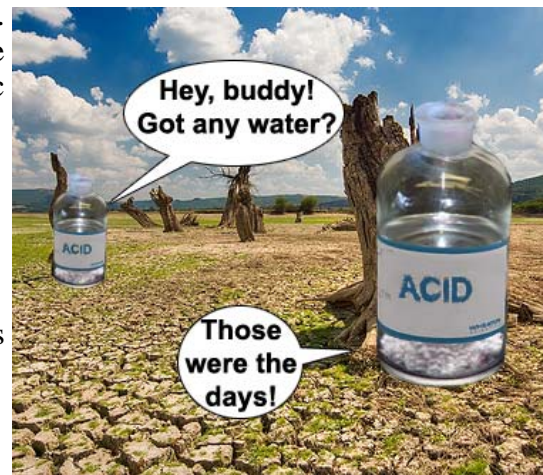
Acid and Base Anhydrides

Acid and base anhydrides are essentially acids or bases minus water. Acid anhydride form oxyacids when mixed with water. It is easy to see the relationship between oxyacids and their anhydrides by doing a basic mathematical subtraction.



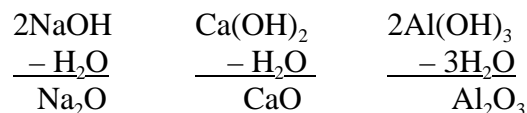
Notice that the acid anhydrides are nonmetallic oxides. Acid anhydrides are the source of acid rain.

Environmental Source	Nonmetallic Oxide	Acid Formed
Car exhaust	Carbon dioxide Nitrogen oxides	Carbonic acid Nitric acid
Coal	Sulfur dioxide Carbon dioxide	Sulfurous acid Carbonic acid
Smelters	Sulfur dioxide Sulfur trioxide	Sulfurous acid Sulfuric Acid
Volcanoes	Sulfur dioxide	Sulfurous acid
Lightning	Nitrogen oxides	Nitric acid



Anhydrides lament their condition

Base anhydrides are metallic oxides. They can be found by subtraction of water too.



Base anhydrides such as lime (CaO) are used to neutralize acid soil.

Answer the questions below based on the reading above and on your knowledge of chemistry.

- State whether each of the following anhydrides is an acid or a base. Write the formula for the acid or base that forms.
 - Li_2O _____
 - P_2O_5 _____
 - N_2O_3 _____
 - BaO _____
 - Cl_2O_7 _____
 - Fe_2O_3 _____
- State whether each of the following is an acid or a base. Write the formula for the acid or base anhydrides that forms.
 - H_2SO_3 _____
 - HClO _____
 - $\text{Mg}(\text{OH})_2$ _____
 - HBrO_3 _____
 - $\text{Zn}(\text{OH})_2$ _____
 - KOH _____
- What effect do carbon dioxide and nitrogen oxides in car exhaust have on the air? _____