

PRACTICE #2/AqChem/Invigorating Reaction Writing Practice/Ap Chemistry

Directions: 1) Using your notes as a guide, write out the reactions and predict the products for the following reactions. Turn each reaction into a NET IONIC equation. *Watch your electrolytes!* YOU DO NOT NEED TO BALANCE RXNS and all reactions DO proceed!! Feel free to make flashcards representing important reactions.

1. COMBINATION RXNS:

- Lithium is heated in the presence of oxygen gas
- Solid barium oxide is added to distilled water.
- Carbon dioxide gas is passed over hot, solid sodium oxide.
- Sulfur dioxide is bubbled into water.
- Solid tetraphosphorus decoxide is sprinkled over water.
- Calcium metal is heated strongly in nitrogen gas.
- Dinitrogen pentoxide gas is added to distilled water.
- Solid iron(II) oxide is reacted with nitrogen dioxide gas.
- Carbon is burned in the presence of oxygen.
- Nitrogen gas and oxygen gas are ignited.
- Solid sodium oxide is added to water.

2. DECOMPOSITION RXNS:

- A piece of chalk, calcium carbonate, is strongly heated.
- A solution of hydrogen peroxide is decomposed (using a catalyst).
- Sodium chlorate is strongly heated (in the presence of a catalyst).
- A sample of water is electrolyzed.
- Solid ammonium carbonate is heated. (sort of tricky! Think of logical products!)
- Solid magnesium sulfite is strongly heated.

3. COMBUSTION RXNS:

- Ethanol, C_2H_5OH , is burned in air.
- Excess oxygen gas is mixed with ammonia gas in the presence of a catalyst.
- Solid zinc sulfide is heated in an excess of oxygen.
- Methane undergoes combustion in the presence of oxygen gas.

4. SINGLE DISPLACEMENT:

- Cadmium metal reacted with a lead(II) nitrate solution.
- Potassium metal is added to water.
- Sodium hydride is sprinkled over distilled water.
- Fluorine gas is bubbled through a solution of potassium iodide.
- Aluminum metal reacts with hydrochloric acid.
- Copper metal is added to a solution of silver nitrate.
- Copper metal reacts with concentrated sulfuric acid. (not a hydrogen replacement!)
- Chlorine gas is bubbled through a solution of sodium bromide.
- Zinc metal is added to a solution of copper nitrate.

5. ACID-BASE REACTIONS:

- A solution of ammonia is added to a solution of acetic acid.
- Sodium carbonate is sprinkled into a solution of hydrochloric acid.
- Solutions of ammonium nitrate and sodium hydroxide are mixed.
- Equal molar amounts of phosphoric acid and potassium hydroxide are mixed.
- Solutions of barium hydroxide and hydrobromic acid are mixed.

