

Name _____

Precipitation Reactions Lab

Solubility is defined as the ability of a substance to dissolve in another substance. We use qualitative terms to describe these abilities. Soluble means a solute readily dissolves and insoluble means a solute does not appreciably dissolve.

If aqueous solutions of two different ionic compounds are mixed, one of two things may occur. If all of the ions remain free, no reaction occurs. The solution remains clear and transparent. However if two oppositely charged ions are attracted to each other strongly enough, they bond together and form an ionic compound that is insoluble in water. This insoluble product is called a precipitate (ppt). These reactions are double replacement reactions.

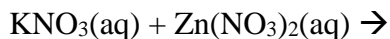
In this lab aqueous solutions of several different ionic compounds will be mixed and the react results observed. Equations will be written for those combinations in which a precipitate forms. You will also make some general statement concerning the solubility of various ions. These are called solubility rules.

Procedure: Observe the following reactions. If a precipitate forms, write **ppt** in the appropriate space. Write the products that are produced, be sure to include the phase symbols, and **BALANCE!** If no reaction occurs, then write does not react (**DNR**).

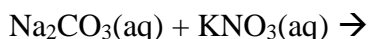
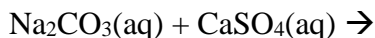
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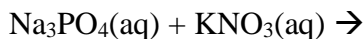
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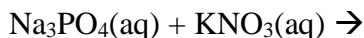
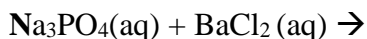
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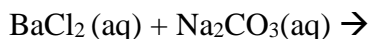
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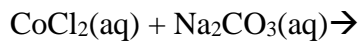
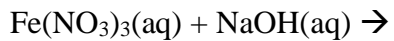
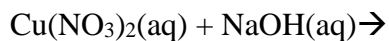


Station 5:



Station 6:



Station 7:**Station 8:****Analyze the Data:**

1. Soluble compounds tend to contain the following ions:

2. Insoluble compounds often contain the following ions:

3. Why are some of the precipitates colored?

4. What is one possible source of error? How does that error impact the results you are trying to obtain?

5. Write **ionic** and **net ionic equations** for each precipitation reaction that occurred.