

7C – SOLUBILITY RULES

Analysis

Table 1 – Observations from mixing

Substance in columns→					
Substances across each row↓	NaNO ₃	NaOH	NaCl	Na ₂ SO ₄	Na ₂ CO ₃
NaNO ₃					
Cu(NO ₃) ₂					
Pb(NO ₃) ₂					
KNO ₃					
AgNO ₃					

1. How many mixtures produced resulted in a reaction with a solid product? (Check again now just to make sure.)
2. Note any patterns you notice regarding items that form aqueous and/or solid solutions. Cite evidence from your data that supports your claim.

3. Write all the reactions that showed a precipitate. Follows these steps.
- Refer to your table and write down the reactant solutions for the mixtures that resulted in a precipitate.
 - These are double replacement reactions. Determine the products by switching the places for the cations and anions.
 - Balance the equations.
4. One of the solubility rules state that all nitrates are soluble. Based on this information, identify the precipitate in the reactions that you wrote.

Questions

1. Make a list of your solubility patterns. Look for similarities.

2. Compare your results and rules with those from another group.
3. Draw a particle level diagram of one of the mixtures that resulted in a reaction.
- If an ionic substance is aqueous, break it into its cations and anions.
 - If an ionic substance is insoluble, try to show the particles in a solid form.
 - Write chemical formulas for the reaction in the boxes provided.

