

Patterns in Solubility

Purpose: To explore factors affecting solubility

Materials: acetate film, .1 M solutions of the following compounds:
 K_2SO_4 ; $BaCl_2$; $NaOH$; NaI ; Na_2CO_3 ; $CuCl_2$; $Pb(NO_3)_2$, Na_3PO_4 ; $AgNO_3$
 $Hg_2(NO_3)_2$

Procedure: Mix 1 – 2 drops of each solution with every other solution individually

Data: Use a Google Sheet to make an appropriate data table for the lab.

Conclusion:

1. For each mixture that resulted in a precipitate, write the possible chemical equation for the reaction. Be sure to write all formulas correctly and then balance the equation.

SUBSCRIPTS THAT ARE PART OF A POLYATOMIC ION CARRY OVER TO THE OTHER SIDE OF THE EQUATION. Other subscripts DO NOT!!

2. In each case where there was a precipitate, use the solubility rules to determine which formula represents the precipitate. PUT A BOX AROUND THE FORMULA THAT IS THE PRECIPITATE.

3. Based on your observations, what generalization can you make about the type of ionic compounds that tend to be insoluble?