To React or Not To React,
That is the question.
Is it nobler to ionize or
not to ionize at all ?

Name:_____

Period:_____

Date:_____

Solubility of Some Ionic Compounds Std 5c

Purpose Mix all combinations possible of 12 aqueous solutions to see if a reaction occurs. The formation of a precipitate (a solid product), the production of a gas or color change, all indicate a chemical change has occurred.

Procedure

1. For the chemicals listed as numbers 1 to 12 on the chart, mix pairs of chemicals by putting one drop of each of the two chemicals on the plastic reaction surface.
2. Put first a white and then a black piece of paper underneath the plastic in order to see each reaction better. Depending on the color of the solutions or the products, black or white may allow you to see the results better.
3. The original solutions are translucent (can see through them clearly, although they may be colored). Determine if a precipitate has formed, in which case the drops will become opaque or cloudy (cannot see through it as well, whether or not there is a color or color change).
4. If there is a solid (precipitate) put an **S** in the box for the reaction. If there is a gas produced (bubbles appear) put **G** in the box for the reaction. If **neither** a gas nor a precipate is formed (no reaction) put an **N** in the box for the reaction.

Prelab instructions:

Use the solubility rules on your chart **Solubility Rules for Salts, Bases, & Acids** (or see chart 7.1 on page 184 and strong acid and base rules chart on p 195). Make up a chart where you can write the following for all of the reactions that form precipitates.

a. A balanced equation for the reaction between the pairs of chemicals.
b. Write $_{(s)}$ next to the precipitate (a solid was formed).

Conclusion:

1. Write down three possible sources of error for this lab.
2. What did you learn in this lab?

Data Sheet for Lab - Solubility of Some Ionic Compounds

	1	2	3	4	5	6	7	8	9	10	11	12
1	x											
2	x	X										
3	x	X	X									
4	x	X	X	X								
5	x	X	X	X	X							
6	x	X	X	X	X	X						
7	x	X	X	X	X	X	X					
8	x	X	X	X	X	X	X	X				
9	x	X	X	X	X	X	X	X	X			
10	x	X	X	X	X	X	X	X	X	X		
11	x	X	X	X	X	X	X	X	X	X	X	
12	x	X	X	X	X	X	X	X	X	X	X	X

Ionic compounds that you will be mixing with each other

1 $Pb(NO_3)_2$
2 $FeCl_3$
3 $Al_2(SO_4)_3$
4 HCl
5 $MnSO_4$
6 $Sr(NO_3)_2$
7 $Ca(OH)_2$
8 K_2CrO_4
9 Na_2CO_3
10 $CoCl_2$
11 $AgNO_3$
12 $Ba(NO_3)_2$