

SOLUBILITY RULES AND NET IONIC EQUATIONS LAB

NAME(S): _____ PERIOD: _____ DATE: _____

Example	AgNO ₃	NaOH	AlCl ₃					
	Ag ⁺ / NO ₃ ⁻	Na ⁺ / OH ⁻	Al ³⁺ / Cl ⁻	/	/	/	/	/
NaCl	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"> <i>White PPT</i> </div>	<div style="font-size: 2em;">X</div>	<div style="font-size: 2em;">X</div>					
Na ⁺ / Cl ⁻								
HCl								
H ⁺ / Cl ⁻								
/								
/								
/								
/								
/								
/								

Directions:

1. Obtain a list of the aqueous reagents available for this lab. Break the list into two groups and write the name of half of the reagents across the top and half down the side in the boxes provided.
2. Write the aqueous ions available from each of these solutions in the boxes provided as indicated in the example.
3. Based on the Solubility Rules, **predict** which of these ion combinations will produce a *liquid*, a *precipitate* or a *gas* and place a **circle** in the square where this product should be observable prior to doing the lab so that you know to test this combination.
4. Write an **X** if there is no reaction.
5. In the lab, test all the combinations you have marked with a circle.
6. Record your **detailed observations** on the matching "sister" sheet.
7. Write the **balanced molecular, ionic and net ionic equation** for each reaction that produced **a unique** and observable product. (A *minimum* of eight required.) Include **ALL charges and states of matter** for full credit.
8. Select **ONE** of these reactions and **draw** a representation of what the ions and precipitate would look like if you could see them in solution. Be sure to represent them in appropriate ratio. (Do not choose any of my prior examples in class.)
9. The completed lab should include the: Title, Purpose, Procedure, Reagent list, both Lab Sheets (one with observations,) the equations required, the drawing, a conclusion statement and a Journal Entry.