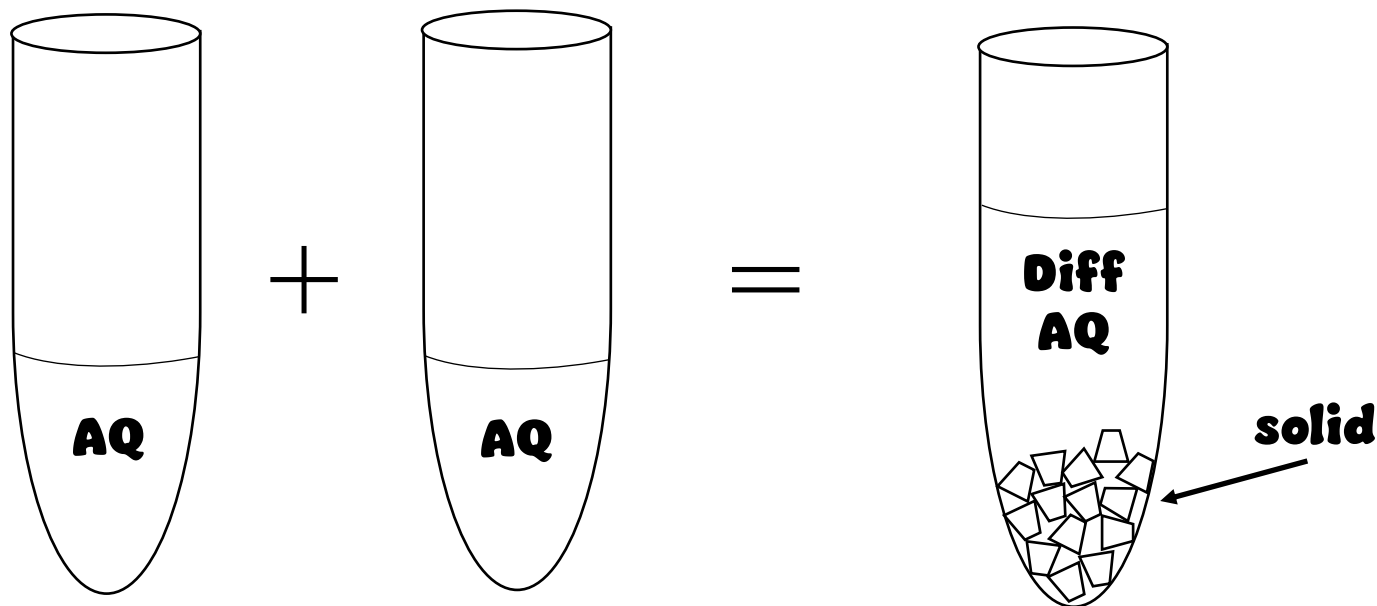


# Precipitate Lab

## Making Ionic Compounds

Name \_\_\_\_\_

(40 minutes)



**Objectives:** In this laboratory activity, you will do 9 double replacement reactions, and observe any precipitates that form. Then write out the balanced chemical equations for each reaction. You will use table F to provide phase symbols.

### Directions:

- Lay the page with the boxes on a flat table surface. Place a plastic sheet over it.
- In each of the squares: put 2 drops of both of the aqueous solutions in each square.
- NEVER TOUCH DROPPER TO THE SHEET!!
- NEVER TOUCH THE EYEDROPPERS TO THE OTHER SOLUTIONS

*Once you have finished wash off the plastic sheets. Clean your lab area up*

When you finish with the wet chemistry, use the sheet with the boxes to write ALL of the ions and criss-cross them to figure out all of the formulas of the reactants.

Do not balance the equations unless you first criss-cross the ions to determine the proper formulas.

No guessing allowed and don't do them in your head either.

DR requires you to switch 'em, fix 'em, balance 'em, and then table F 'em for their phase symbols.

**BALANCED EQUATIONS**  
***PHASE SYMBOLS ARE MANDATORY***

A



P  
H  
A  
S  
E  
S

B



P  
H  
A  
S  
E  
S

C



P  
H  
A  
S  
E  
S

D



P  
H  
A  
S  
E  
S

E



P  
H  
A  
S  
E  
S

F



P  
H  
A  
S  
E  
S

G



P  
H  
A  
S  
E  
S

H



P  
H  
A  
S  
E  
S

I



P  
H  
A  
S  
E  
S

## Six Lab Questions

1. Explain the “KB square dance” reference that explains how a double replacement reaction happen.  
(Love = precipitate = DR)
2. Describe what happens when table salt is put into water. Include the word “ionization” and “this solution contains loose...” in your answer. COPY the chemical symbols (look on table I). Would this solution conduct electricity?
3. Describe what happens when table sugar ( $C_{12}H_{22}O_{11}$ ) into water. Include “the sugar water solution contains loose..., but does not contain any...” in your answer. Use symbols to show this too. Would this solution conduct electricity?
4. Describe what happens when you put calcium sulfate into water. Why would it NOT dissolve in water? Would this conduct electricity? Define ELECTROLYTE.  
Which compounds from questions 2, 3 and 4 are electrolytes?

For 5 + 6 you must use phase symbols for reactants and products. You must write out the ions with charges, then the formulas for the reactants. Do these on ONE LINE. Write small enough to fit them both on one line each. Switch, fix, balance, and table F the products.

5. Write a balanced chemical equation with phases for the double replacement reaction between ammonium phosphate and niobium (V) nitrate solutions.
6. Write a balanced chemical equation with phases for the double replacement reaction between the two aqueous solutions of lead (II) acetate and sodium bromide.

This lab report	Includes	points
Cover	Title, optional drawing, single sentence explaining what you did today.	1
1	9 balanced chemical reactions WITH PHASE SYMBOLS	9
2	6 lab questions on loose leaf paper (they are on last page)	6
Conclusion	1 Name the 6 main indicators of chemical reactions 2 Explain what this means: $AQ + AQ \rightarrow \text{diff } AQ + \text{Solid}$ 3 Explain what this means: $AQ + AQ \rightarrow \text{diff } AQ + \text{diff } AQ$ 4 Then tell how and why we use Table F. 5 Define electrolytic solution + give 3 examples of electrolyte solutions. 6 Using table F, Name 3 ionic compounds that <u>do not</u> dissolve in water. 7 If an ionic compound FORMS during a Double Replacement Reaction it precipitates. What happens when you put that same compound into water? 8 Copy the symbols for the dissociation of potassium nitrate in water from table I. 9 Copy the symbols for the ionization of ammonium nitrate in water from table I.	9
<b>THIS LAB REPORT IS DUE</b>		<b>25</b>



☺	Copper (II) sulfate	Magnesium nitrate	Cobalt (II) chloride
sodium carbonate	A	B	C
ammonium phosphate	D	E	F
lithium hydroxide	G	H	I