Name_____ Period_____ Date_____

Lab: Double Replacement

This experiment demonstrates reactions that occur between two aqueous solutions. The driving force for the reaction is the formation of an insoluble product.

Aim (2pt)_____

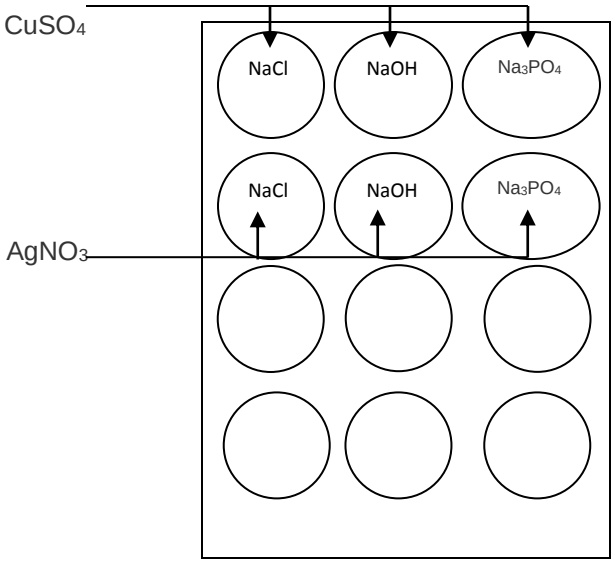
_____

Vocabulary (6pts)
Double Replacement Reaction:

Precipitate

Materials

0.1 M NaCl
0.1 M $CuSO_4$
0.1 M $AgNO_3$
0.1 M Na_3PO_4
0.1 M NaOH
spot plate
5 droppers



Procedure

1. Using Table F and the reactants listed, predict if a reaction will occur (if an insoluble precipitate will be formed).
2. Using a spot plate, place 10 drops of NaCl solution into wells I and IV, 10 drops of NaOH into wells II and V, and 10 drops of Na_3PO_4 into wells III and VI.
3. Using the diagram above, add 10 drops of $CuSO_4$ to wells I, II, and III and 10 drops of $AgNO_3$ to wells IV, V, and VI.
4. Note any color changes or precipitate formation. If no precipitate formed, NO REACTION occurred.

Data and Observations:

Reactants	Prediction (4 pts ea)	Observation (4 pts ea)
I. NaCl(aq) + $CuSO_4$(aq)		
II. NaOH(aq) + $CuSO_4$(aq)		
III. Na_3PO_4(aq) + $CuSO_4$(aq)		
IV. NaCl(aq) + $AgNO_3$(aq)		
V. NaOH(aq) + $AgNO_3$(aq)		
VI. Na_3PO_4(aq) + $AgNO_3$(aq)		

Analysis:

Write a balanced equation for the reactions that occur. Include physical state symbols for the reactants and products. If no precipitate formed, NO REACTION occurred. (4 pts each)

I. __NaCl (aq) + __$CuSO_4$ (aq) -->

II. __NaOH (aq) + __$CuSO_4$ (aq) -->

III. __Na_3PO_4 (aq) + __$CuSO_4$ (aq) -->

IV. ___NaCl (aq) + ___$AgNO_3$ (aq) -->

V. ___NaOH (aq) + ___$AgNO_3$ (aq) -->

VI. ___Na_3PO_4 (aq) + ___$AgNO_3$ (aq) -->

Disposal

Aqueous solutions may be flushed down the sink. Solids should be collected and placed into a labeled, solid waste container.

Conclusion Write a full conclusion RERUN you must include a comparison between your laboratory results (your observations) and information from Table F (your predictions). (20 points)