Name: _____ Group: _____ Date: _____

LAB 23
OBSERVATION

PRECIPITATION

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Goal

Recognize and observe precipitation.

Observation criteria

1. What is precipitation?

_____

_____

2. What are observation indicators of precipitation?

_____

Materials

- spot plate
- 6 dropper bottles labelled A to F with following solutions:
  - A – lead nitrate ($Pb(NO_3)_2$)
  - B – sodium iodide (NaI)
  - C – copper sulphate ($CuSO_4$)
  - D – potassium carbonate (K_2CO_3)
  - E – nickel chloride ($NiCl_2$)
  - F – sodium hydroxide (NaOH)
- glass stirring rod *or* toothpick
- wash bottle of distilled water
- 250-mL beaker

Procedure

1. Place 5 drops of solution A into each of 6 wells in the spot plate.

2. Into the first well, add 5 drops of solution A; into the second well, add 5 drops of solution B; into the third well, add 5 drops of solution C; into the fourth well, add 5 drops of solution D; into the fifth well, add 5 drops of solution E; into the sixth well, add 5 drops of solution F.

3. Mix each solution with the glass stirring rod, rinsing it thoroughly with distilled water after each use.

4. Observe the solutions while mixing and note the wells showing signs of precipitation.

5. Empty contents of the spot plate into the beaker.

6. Thoroughly rinse and dry the spot plate.

7. Repeat steps 1 to 6 substituting in step 1 in turn: solution B, solution C, solution D, solution E and solution F.

8. Dispose of the contents of the beaker as instructed by your lab supervisor.

9. Clean up and put away materials.

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Observations

Record your observations in the table below. Give the table a title.

Title:

		Starting solution					
		A	B	C	D	E	F
Solution added subsequently	A						
	B						
	C						
	D						
	E						
	F						

Reflecting on your observations

1. In how many wells of the spot plate does precipitation occur? Is each precipation the result of mixing different solutions?

_____

_____

2. Do your observations help you to better understand the reaction of precipitation?

_____

3. Does a well in which precipitation occurs indicate a physical change or a chemical change? Explain your answer.

_____

_____

4. What characteristic property is involved during the reaction of precipitation? Explain your answer.

_____

5. How could you improve the protocol for this lab?

_____