

CHEQ 1094: CHEMICAL REACTIONS

Date: _____

Name: _____

Lab Day/Time: _____

Objective

To make careful observations of chemical reactions using the senses of sight, touch, and smell, and to describe the chemical reactions that have taken place in terms of balanced chemical equations.

Procedure

As in the Chem 1094 lab manual, pages _____

Observations and Chemical Reactions (see next page)

Part I: Chemical reactions

PROCEDURE 1

To 5 drops of lead (II) nitrate solution, add 5 drops of potassium iodide solution.

Observations

Equation

PROCEDURE 2

To 5 drops of lead (II) nitrate solution, add 15 drops of hydrochloric acid solution.

Observations

Equation

PROCEDURE 3

To a small piece of magnesium metal, add 1 mL of hydrochloric acid solution.

Observations

Equation

PROCEDURE 4

To 3 mL of sodium hydroxide solution, add 3 mL of hydrochloric acid solution.

Observations

Equation

PROCEDURE 5

To a piece of zinc metal, add 1 mL of copper (II) sulfate solution.

Observations

Equation

PROCEDURE 6

To 10 drops of sodium chloride solution, add 5 drops of silver nitrate solution.

Observations

Equation

PROCEDURE 7

To 5 drops of barium chloride solution, add 5 drops of sodium carbonate solution.

Observations

Equation

PROCEDURE 8

To 5 drops of barium nitrate solution, add 5 drops of sodium sulfate solution.

Observations

Equation

PROCEDURE 9

To 1 mL of hydrochloric acid solution, add 10 drops of sodium carbonate solution.

Observations

Equation

PROCEDURE 10

To 10 drops of sodium carbonate solution, add 5 drops of copper (II) sulfate solution.

Observations

Equation

PROCEDURE 11 (OPTIONAL, AT THE DISCRETION OF THE LAB INSTRUCTOR)

Dip a clean piece of copper wire into a thin layer of silver nitrate solution which is sitting in a watchglass under a stereomicroscope. Observe the results through the stereomicroscope.

Observations

Equation

Part II: Physical Processes**PROCEDURE 12**

To 3 mL of distilled water, add 1 gram of solid ammonium chloride.

Observations

Equation

PROCEDURE 13

To 3 mL of distilled water, add 1 g of solid calcium chloride.

Observations

Equation

PROCEDURE 14

To 5 drops of nickel(II) chloride solution, add 10 drops of sodium chloride solution.

Observations

Equation

Part III: Precipitation Reactions

	Cl ⁻	SO ₄ ²⁻	I ⁻	CO ₃ ²⁻	CrO ₄ ²⁻	Unknown (anion)
Ag ⁺						
Ni ²⁺						
Pb ²⁺						
Ba ²⁺						
Unknown (cation)						

Conclusion

Questions

Attach any questions assigned by your lab instructor.