

Group # _____

Name _____

Period ____ Date ____/____/____

Lab Ch 3 • Physical and Chem Changes

Lab Partners: _____

Objective of Lab

To perform several experiments to observe physical and chemical reactions.

Materials: (Make your table for Chemicals & Equipment)

10mL graduated cylinders, ring-stand, iron ring, wire gauze, pipets, 6-test tubes, spatula, mortar & pestle, Bunsen burner, vegetable oil, water, piece of paper, sodium chloride, baking soda, vinegar, copper (II) sulfate pentahydrate, magnesium ribbon, silver nitrate, hydrochloric acid

Procedures: Follow the instructions as written in your data table. Record your observations and classify it as a physical or chemical change.

Data Table:

Experiment	Observations	Chemical or Physical Change?
1. In a test tube, add about 15 drops of oil to 10 mL of water. The shake the test tube.		
2. Add NaCl(s) (pea size) to a test tube and add 10mL DI water.		
3. Add 2 drops of AgNO ₃ (BE CAREFUL) to the mixture that you just made in step #2.		

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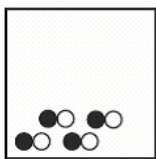
4. Add a pea size amount of baking soda to a test tube with 10 mL of vinegar.		
5. Using a mortar and pestle, grind $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$		
6. Heating $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ in a test tube until it turns white (not brown!!) Move test tube around flame.		
7. When it cools add a couple drops of DI water to test tube from step #6 (solid can go in trash)		
8. Cut a small piece of Mg ribbon (about 1 inch in size)		
9. Add 1 mL of 6M HCl(aq) (ACID - Be careful) to the Mg ribbon you cut from step #8 in a test tube. (Mg piece throw in trash, liquid in sink. Use the rubber part of stir rod to help get metal out)		

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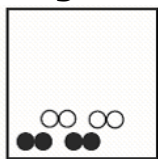
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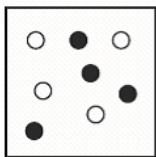
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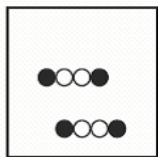
(1)



(3)



(2)



(4)

5. Which statement describes a chemical property of oxygen?

- (1) Oxygen has a melting point of 55 K.
- (2) Oxygen can combine with a metal to produce a compound.
- (3) Oxygen gas is slightly soluble in water.
- (4) Oxygen gas can be compressed.

6. Which set of procedures and observations indicates a chemical change?

- (1) Ethanol is added to an empty beaker and the ethanol eventually disappears.
- (2) A solid is gently heated in a crucible and the solid slowly turns to liquid.
- (3) Large crystals are crushed with a mortar and pestle and become powder.
- (4) A cool, shiny metal is added to water in a beaker and rapid bubbling occurs.