Lab 7 - Chemical Reactions

Introduction:
(Write 10 facts from Chapter 11.)

Materials:

500mL Erlenmeyer flask
125mL Erlenmeyer flask
250mL beaker
2 rubber stoppers
stirring rod
tongs
graduated cylinders
KOH solid
dextrose solid

methylene blue indicator
universal indicator
dry ice
scale
spatula
watch glasses
0.1 M $AgNO_3$
0.8 M KOH
0.25 M dextrose
concentrated NH_3

Procedures:

<u>Part 1: Blue Bottle Reaction</u>

1. Pour 300 mL of water in the 500 mL flask.
2. Weigh 8 g of KOH and add it to the flask. Swirl the flask until the KOH dissolves.
3. Weigh 10 g of dextrose and add it to the flask. Swirl the flask.
4. Add 8 drops of methylene blue indicator to the flask. Swirl the flask and close it with the rubber stopper.
5. Allow the flask to sit undisturbed until the color disappears. After the color is gone, you can shake the flask and it will return. Record observations.
6. Clean up: Rinse out the flask.

<u>Part 2: Silver Mirror Reaction</u>

1. Pour 40 mL of 0.1 M $AgNO_3$ into the 125 mL flask.
2. Add drops of NH_3 to the flask until a precipitate forms. Continue adding drops of NH_3 until the precipitate dissolves. Swirl the flask the ENTIRE time.
3. Add 20 mL of 0.8 M KOH to the flask. If a precipitate forms, add drops of NH_3 until it dissolves again. Swirl the flask while adding the NH_3.
4. Add 5 mL of 0.25 M dextrose and close the flask with the rubber stopper.
5. Shake the flask <u>continuously</u> for about 10 minutes. Record observations.
6. Clean up: Rinse out the flask.

<u>Part 3: Dry Ice Rainbow</u>

1. Add 250 mL of water to a beaker.
2. Add 1 pipet of universal indicator.
3. Add drops of NH_3 to the water until it turns purple. Stir while adding.
4. With tongs add a chunk of dry ice. DO NOT TOUCH THE DRY ICE WITH YOUR HANDS. Record observations.
5. Clean up: Rinse out the beaker.

Data:
(I will show you how to do data in class.)

Questions: (Write the questions and answer them.)

1. **<u>Why</u>** did the color change in Part 1 just by shaking the flask?
2. What was the precipitate in Part 2?
3. Why did the indicator change color in Part 3?
4. What is the formula for dry ice?
5. List the 5 types of reactions and write the generic reactions for each.

Conclusion:
(Write 3 sentences about any mistakes you made, anything that you learned, how the lab relates to real life, or other reactions that you have seen that are similar to this lab.)

CHEMICAL REACTIONS IN EVERYDAY LIFE

COMBUSTION

RUST

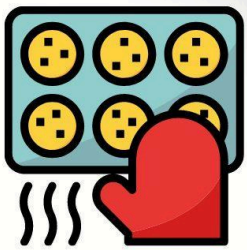
DIGESTION

PHOTOSYNTHESIS

BATTERIES

FERMENTATION

WASHING



BAKING

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