Lab: Chemical Reactions /20

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*\*NOTE – this is only a skeleton report, not your good copy. Lab write ups must be typed or electronically done. A scoring rubric will be provided to you.*

**Question:** What chemical changes happen during different types of chemical reactions?

**Materials:** *This is not a complete list! Be sure to add all equipment that you use!*

Anhydrous copper (II) sulphate

Water

Copper (II) sulphate penta-hydrate crystals

Zinc metal

Hydrochloric acid solution

Copper (II) sulphate solution

Silver nitrate solution

**Safety Precautions:** *create a list as discussed in class.*

**Procedure #1**

1. Place about 2 grams of anhydrous copper (II) sulphate in a test tube. Record the colour.
2. Hold the test tube by curling your fingers around it, so you can detect a temperature change when you add water.
3. Using an eye dropper, add 5 drops of water. Record any temperature changes or colour changes.

**Procedure #2**

1. Combine 5 drops of silver nitrate with 5 drops of copper (II) sulphate solution in a test tube.
2. Slightly swirl the mixture, record all results.

**Procedure #3**

1. Place 5 grams of copper (II) sulphate penta-hydrate in a test tube.
2. Using tongs, heat the test tube with the Bunsen burner. Note the formation of any product on the walls of the test tube. Note any colour changes in the material at the bottom of the test tube.
3. Once the test tube is cool to the touch, add a few drops of water to the product. Record all observations.

**Procedure #4**

1. Add 10 mL of hydrochloric acid to a test tube using a graduated cylinder.
2. Add one piece of zinc metal and swirl the tube.
3. Record all observations

**Observations:**

Set up a chart like the following, to collect you data: be sure to give it a title!

|  |  |  |
| --- | --- | --- |
| Procedure Number | Chemicals Involved | Observations |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |

**Analysis:**

1. For each of the procedures list the correct chemical reaction taking place. Be sure to balance the equation and include states of matter.
2. Write a summary describing the observations you saw, indicating the reaction type for each chemical reaction.

**Conclusion**