

Chemical / Physical Change Lab

Pre-Lab

- Intensive Property: Does not depend on the size of the sample of matter (boiling point, melting point, density, ductility, etc.)
 - Extrinsic Property: Does depend on the size of the sample of matter (mass, volume, length)
1. Give an example of an intrinsic property of the CuCl_2 you will use.
 2. Give an example of an extrinsic property of the CuCl_2 you will use.
 3. How do you know if a chemical change has occurred?

Purposes

- Distinguish between chemical and physical changes
- Distinguish between Chemical and physical properties.
- Distinguish between intrinsic and extrinsic properties

PART 1: MAKING A SOLUTION

Materials

- Large test tube
- Tap water
- CuCl_2
- Scoopula

Procedures

1. Fill a large test tube about $\frac{1}{2}$ way with tap water.
2. Place about 3 grams of CuCl_2 in the test tube. (Keep this solution for part 2)

Questions

1. What type of change is occurring here? Explain.
2. Classify the type of matter (element, compound, homogeneous mixture, heterogeneous mixture) present in the test tube.
3. What are some physical properties of the solution?

PART 2: ION REPLACEMENT

Materials

- Part 1 solution
- Aluminum foil

Procedures

1. Roll up a 2x2 inch piece of aluminum foil as though it were a burrito full of air.
2. Put the foil into the test tube and write down your observations.

Questions

4. What type of change is occurring here? Explain.

PART 3: HEATING SOLIDS

Materials

- CuSO_4
- Large test tube
- Bunsen burner
- Test tube holder

Procedures

1. Put about 2 grams of CuSO_4 into a clean, dry test tube.
2. Heat the material over a burner until you see that a change has been completed. Be careful – you want to heat but not burn the material. If it starts to turn brown, it is burning and you should remove it from the heat for a bit.

Questions

5. What type of change occurred here? Explain.
6. Give at least one example of a chemical property observed today in lab.

Conclusion: Write a short summary that addresses the purposes, what you did, and your findings.