

Copper Mining Lab Instructions

Ms. Bankoff

Supplies

These are the supplies you need:



Instructions:

1. Closely observe a piece of your mineral sample. Record observations on your laboratory sheet.



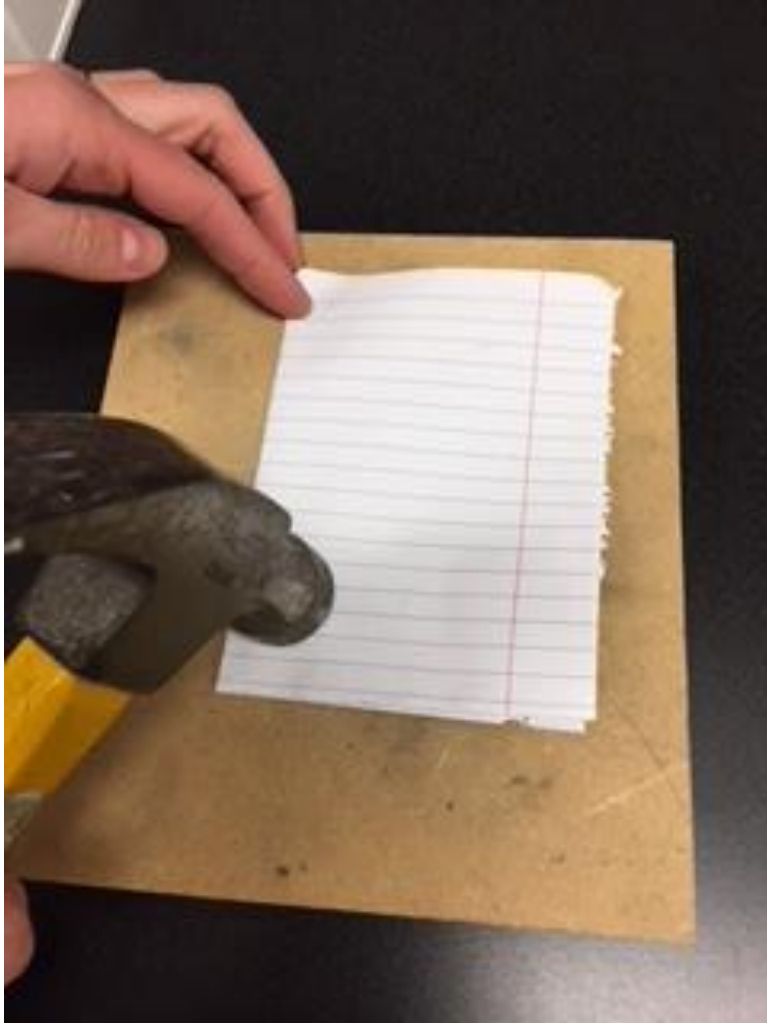
Instructions:

2. Wrap the mineral piece in several sheets of scrap paper.



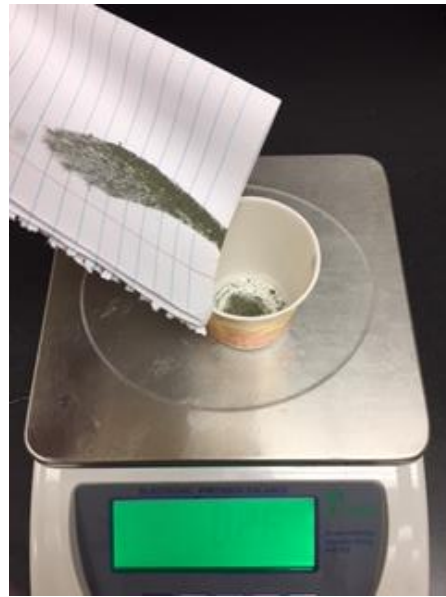
Instructions:

3. Place the wrapped mineral on a hard, durable surface and pulverize the rock with a hammer into a fine powder.



Instructions:

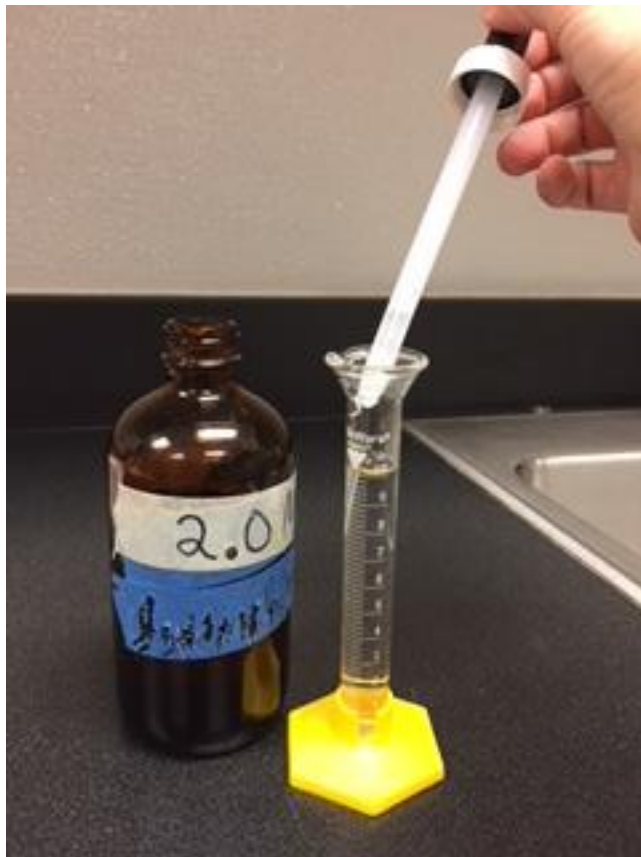
4. Using a balance, weight out **1 gram** of the pulverized mineral and place it into a clean **test tube**.



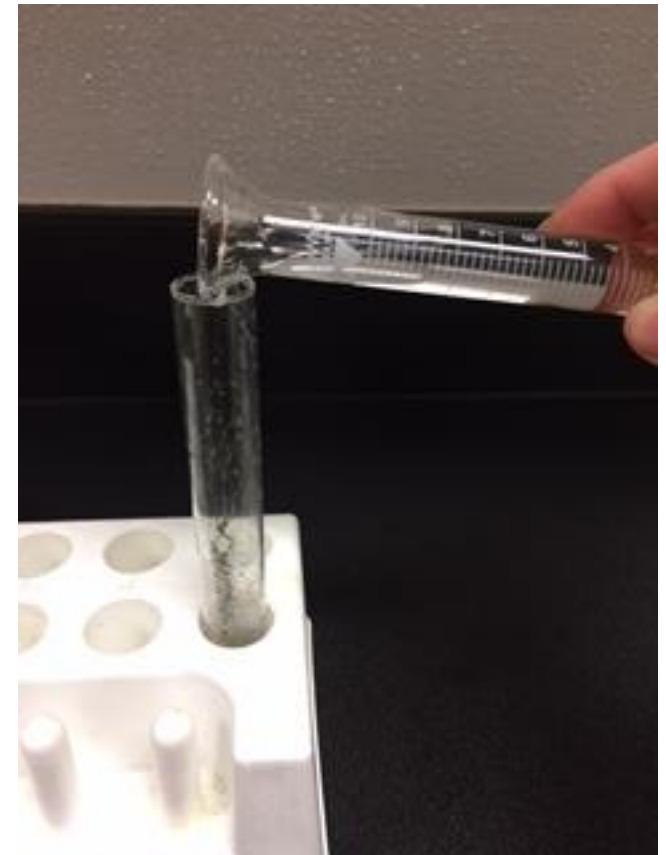
Place empty cup on scale. Then hit ZERO.

Instructions:

5. Using a graduated cylinder, measure and add 20mL of 2M sulfuric acid solution to the **test tube**. Do not mix rocks and acid in the graduated cylinder! Observe and record the reaction between the mineral and the sulfuric acid.



← Do this twice
(10mL x 2 = 20mL)



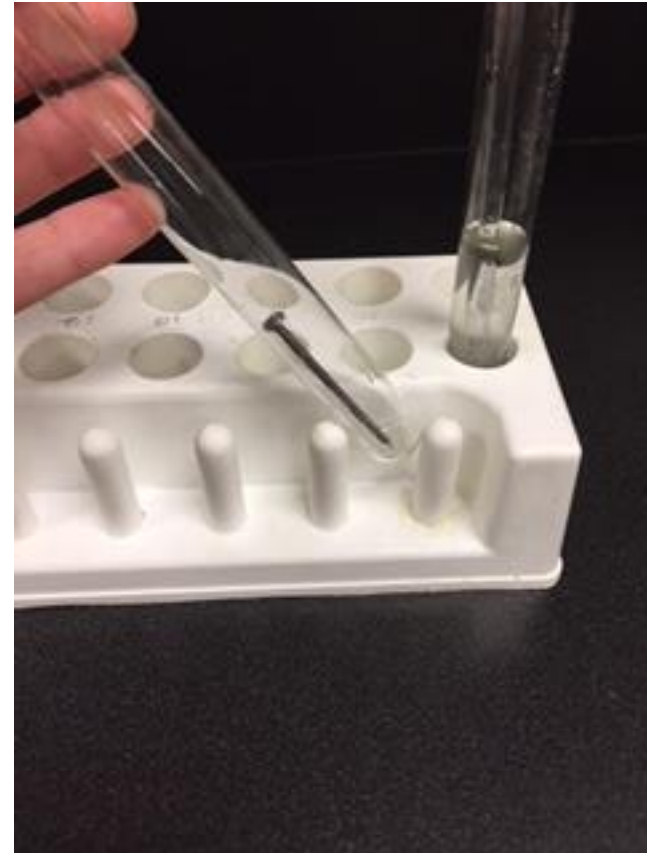
Instructions:

6. Allow the sulfuric acid to leach copper from the mineral for 20 minutes, stirring occasionally with a glass stirring rod.



Instructions:

7. While waiting, use sandpaper to sand the surface of the nail. Carefully place the nail point-side down into an **empty** clean test tube.



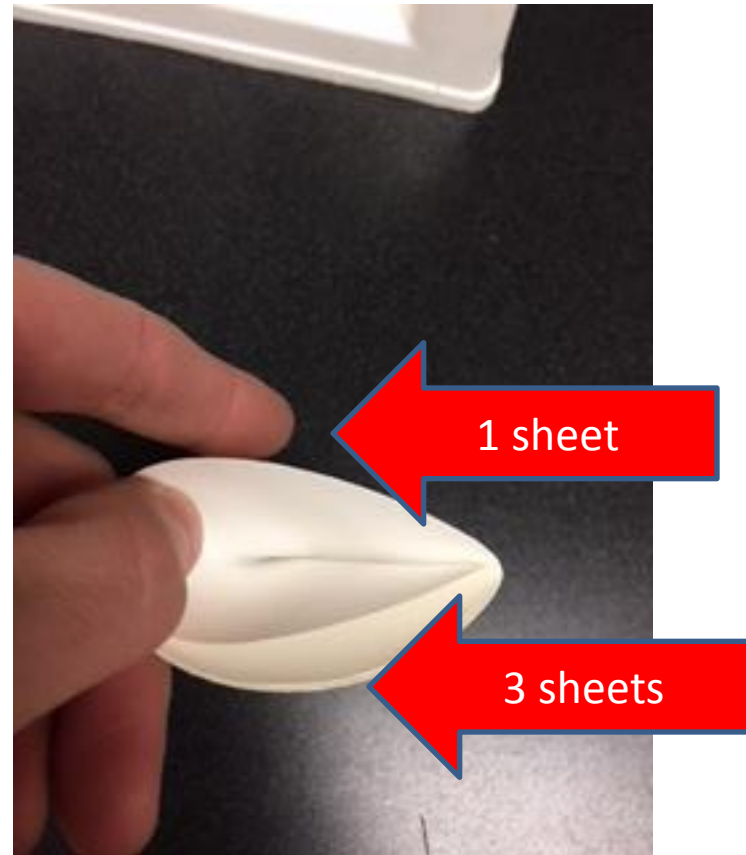
Instructions:

8. Place a funnel into the top of a **clean test tube with the nail.**



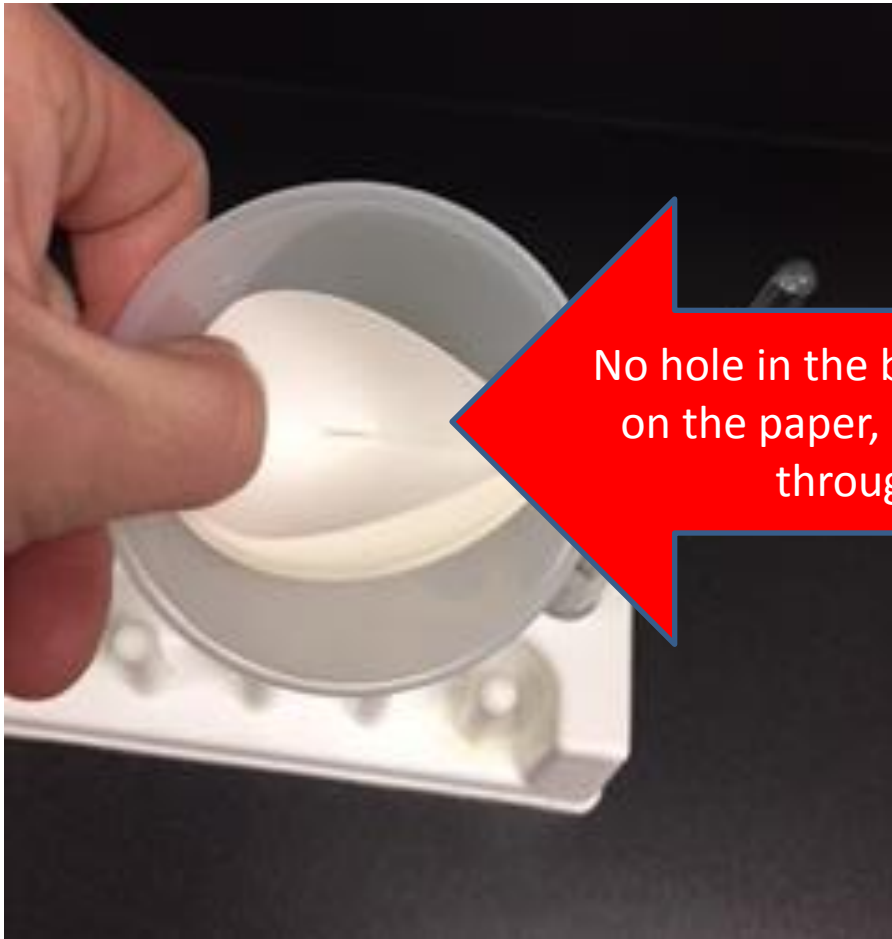
Instructions:

9. Fold a piece of filter paper in half, and then in half again.



Instructions:

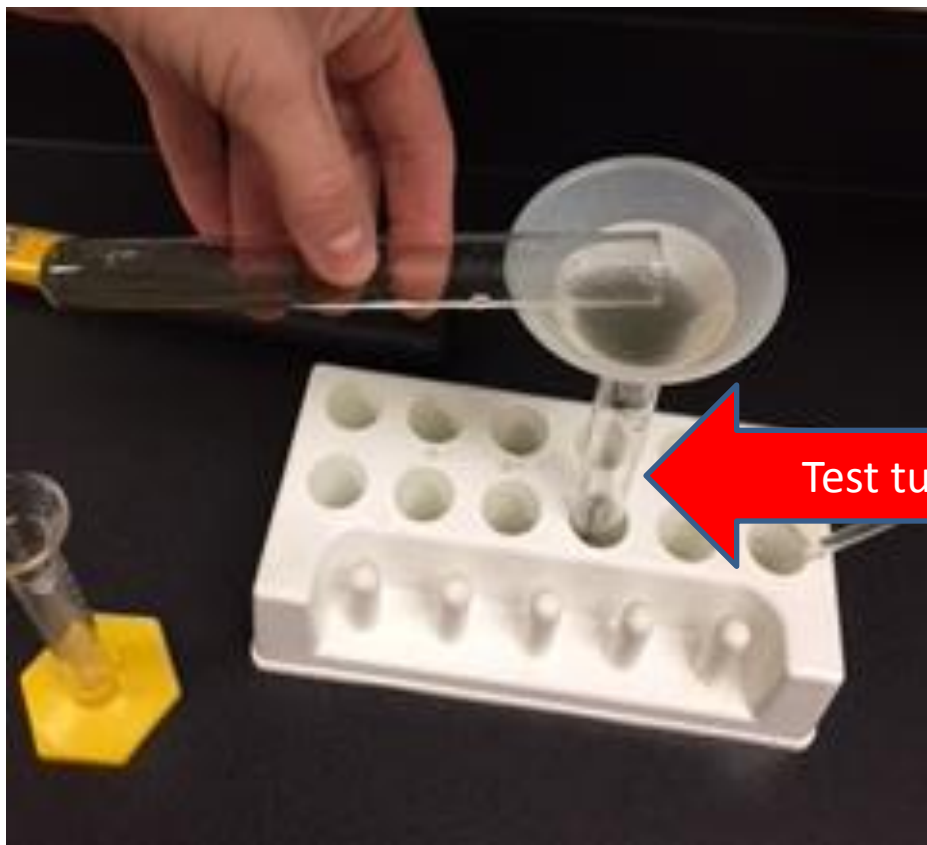
10. Place the folded filter paper into the funnel.



No hole in the bottom. Rocks stay on the paper, while liquid goes through paper.

Instructions:

11. Carefully pour the sulfuric acid – mineral mixture into the filter paper. Closely observe the drops of copper sulfate solution as it drips through the filter paper and lands on the sanded nail. Record your observations on your laboratory sheet.



Test tube with nail

Instructions:

12. Observe the color of the solution as it drips from the filter paper. Record your observations on your laboratory sheet.



Instructions:

13. Follow disposal directions given by your teacher, and complete the post lab questions.