

Purpose: To discover about metallic bonding and to create an alloy.

CAUTION: Wear safety goggles and aprons throughout this lab. NaOH is very caustic. Tell the teacher immediately if you spill or get any on yourself or if fumes are created. ***DO NOT LET SOLUTION OF ZINC AND NaOH BOIL!*** VERY HARMFUL TO BREATHE FUMES. YOU ARE WORKING WITH AN OPEN FLAME SO SECURE HAIR AND ANY LOOSE CLOTHING TOO.

Procedure:

1. Every person must obtain a clean penny. Scrub the penny with steel wool if it is not clean and shiny.
2. Practice lifting ceramic evaporating dish off of hot plate with tongs.
3. Place pennies (no more than 2 or 3 per dish) in evaporating dish and heat. DO NOT ALLOW BOILING, REMOVE DISH FROM HEAT IMMEDIATELY IF BOILING BEGINS.
4. Once penny is coated in a silvery color so that it looks like a nickel (it has been coated with the zinc) remove penny with tongs from dish.
5. Using tongs rinse penny in the beaker of water.
6. Next hold the penny with the tongs in the flame of the Bunsen burner, turning it gently. Watch for the penny to turn a brassy golden color and remove it from the flame. Now the Zinc and Copper have melted together.

Sketch and Label Lab Set-up here:

Tape one of your brass penny here →