

CP ADVANCED CHEMISTRY  
EXPERIMENT NUMBER #5  
PENNIES

NAME \_\_\_\_\_  
SECTION \_\_ DATE \_\_\_\_\_  
NAME OF LAB PARTNER \_\_\_\_\_

**Purpose:**

To find the density of pennies minted before 1982 and after 1983 to determine the metal in the cores of pennies minted after 1983

**Procedure**

- 1. Work with one set of pennies- either pre 1982 or post-1983
- 2. Find the mass of 5 pennies
- 3. Find the mass of 10, 15, 20 and 25 pennies
- 4. Fill a 50 mL graduated cylinder to the 20 mL mark with water
- 5. Add 5 pennies and record the CHANGE in volume
- 6. Continue to find the volume 10, 15, 20, and 25 pennies.
- 7. Repeat using the other set of pennies.

**Data:**

Data for Pre-1983 Pennies

Number of Pennies	Mass (g)	Volume of Water and Pennies (ml)	Volume of Water Alone (ml)	Volume of Pennies Alone (ml)
5				
10				
15				
20				
25				

Data for Post-1983 Pennies

Number of Pennies	Mass (g)	Volume of Water and Pennies (ml)	Volume of Water Alone (ml)	Volume of Pennies Alone (ml)
5				
10				
15				
20				
25				

**Calculations:**

Density of Pre-1983 Pennies

5 pennies:

10 pennies

15 pennies

20 pennies

Average Density:

**SLOPE CALCULATIONS:**

Pre-1983 Pennies

Density of Post-1983 Pennies

5 pennies

10 pennies

15 pennies

20 pennies

Average Density:

Post-1983 Pennies

**Percent Error:**

Pre-1983 Pennies

Post-1983 Pennies

**Conclusion:**