Density determination lab report essay

LAB REPORT #1 DENSITY DETERMINATION CHEMISTRY

INTRODUCTION: The purpose of this experiment is to find out the density of the unknown solid object by determining the mass and the volume through the experiment. To do this we will be get the mass of the object and determine the volume of the object by placing it into a liquid. Then we will divide mass by volume and get its density.

PROCEDURE:

1. Obtain a solid metal
2. Weigh the dry sample carefully to the nearest 0. 0001 grams on the top loading balance.
3. Determine the volume of your unknown solid sample by liquid displacement.
4. Select a graduated cylinder (for best volume determination smaller is better) into which the solid can be inserted.
5. Fill your cylinder about half full of water and record the temperature.
6. Then read the volume as precisely as possible and record it
7. Tilt the cylinder and slide the solid down the inside being careful not to splash water out of the cylinder.
8. Record the volume.
9. The increase in the volume of water in the cylinder gives the volume of the solid.
10. Determine the density of the solid by using this equation:

    Density = Mass/ Volume

RESULTS: | TEMPERATURE BEFORE| TEMPERATURE AFTER| VOLUME BEFORE| VOLUME AFTER| VOLUME OF SOLID| 1| 24| 23| 63| 70| 7| 2| 24| 23| 74. 2| 81. 1| 6. 9| 3| 24| 24| 78| 84. 5| 6. 5|

CALCULATIONS:

- Unknown ID : C
- Unknown ID : C
- Unknown ID : C
- Mass of Unknown : 56. 8 gr
- Mass of Unknown : 56. 8 gr
- Mass of Unknown : 56. 8 gr
- Initial Volume : 63
- Initial Volume : 74.
- Initial Volume : 78
- Final Volume : 70
- Final Volume : 81. 1
- Final Volume : 84. 5
- Volume of Unknown : 7
- Volume of Unknown : 6. 9
- Volume of Unknown : 6. 5 D= M/V D= M/V D= M/V D= 56. 8/7 D= 56. 8/6. 9 D= 56. 8/6.
- Density of Unknown : 8. 11
- Density of Unknown : 8. 2
- Density of Unknown : 8. 7

CONCLUSION: The purpose of the experiment was to determine the density of the solid through mass and volume. Unknown solid (C) was obtained and

weighed. A cylinder was filled half way with water. The volume was recorded. The unknown was placed in the cylinder filled with water and the volume was recorded once again. The volume of the solid was calculated by the increase of the cylinders volume and the density was calculated with the equation D= M. V.