01b Measurement Lab (1806288)

Question 1 2 3 4 5 6

Description

Measurement Lab Materials: Wood block, unknown metal solid, distilled water, unknown liquid, ruler, balance, 50 mL glass graduated cylinder, 250 mL plastic graduated cylinder, 150 mL beaker, buret, magnifying glass, index card

Objectives: To learn the proper use of common measuring devices. To determine the density of substances using significant figures.

Procedure: A. Density of wood.
1. Find the volume of a wood block by measuring the length, width and height. Use significant digits. Record length, width, & height in the data table. From this data calculate volume. (V= L x W x H) Use significant figures.
2. Find the mass of the block. Use significant figures.
3. Calculate the density of wood. Use significant figures.

B. Density of distilled water.
1. Find the mass of a 150 mL beaker. Use significant figures.
2. Measure 50.0 mL of distilled water with a glass graduated cylinder.
3. Pour the water carefully and completely into the beaker.
4. Find the mass of the water and beaker combined. Dispose the water into the sink.
5. Calculate the mass of the water. Use significant figures.
6. Calculate the density of the water. Use significant figures.

C. Density of unknown liquid. (Caution! Unknown is toxic, flammable, and expensive.)
1. Find the mass of a 150 mL beaker. Use significant figures.
2. Obtain an exact volume of unknown(close to 20.00 mL) from the buret on the reagent table in your weighed 150 mL beaker.
3. Record the volume. Use significant figures.
4. Find the mass of the unknown and beaker.
5. Calculate the density of the unknown. Use significant figures.
6. Return unknown to the erlenmeyer (conical) waste flask on reagent table.

D. Density of unknown metal solid.
1. Obtain the unknown from your instructor and determine its density using your ingenuity,a balance, a 250 mL plastic graduated cylinder and tap water

Calculations:
1. Calculate the density of the wood. Use significant figures.
2. Calculate the density of the water(at room temp.). Use significant figures.
3. Calculate the density of the unknown liquid. Use significant figures.
4. Calculate the density of the unknown solid. Use significant figures.

Instructions

Submit each measurement before you enter the next measurement.

1. Question Details Lab Partners [1837468]

Enter the name(s) of your lab partner(s). (If you worked by yourself, enter "none").

2. Question Details Density of Wood [1760999]

a. Enter the length of the wood in cm: 4.0 ☑ [ ] cm

b. Enter the width of the wood in cm: 4.0 ☑ [ ] cm

c. Enter the height of the wood in cm: 4.0 ☑ [ ] cm

d. Calculate the volume of the wood: 4.0 ☑ [ ] cm^3

e. Enter the mass of the wood: 4.0 ☑ [ ] g

f. Calculate the density of the wood: 4.0 ☑ [ ] g/cm^3

3. Question Details Density of Water [1761000]

a. Enter the mass of the beaker: 4.0 ☑ [ ] g

b. Enter the volume of the water: 4.0 ☑ [ ] mL

c. Enter the mass of the beaker + water: 4.0 ☑ [ ] g

d. Calculate the mass of the water: 4.0 ☑ [ ] g

e. Calculate the density of the water: 4.0 ☑ [ ] g/mL

4. Question Details Density of Unknown Liquid [1761007]

a. Enter the mass of the beaker: [ ] g

b. Enter the initial reading of the buret containing the unknown liquid: [ ] mL

c. Enter the final reading of the buret containing the unknown liquid: [ ] mL

d. Enter the volume of the unknown liquid: [ ] mL

e. Enter the mass of the beaker + liquid: [ ] g

f. Calculate the mass of the unknown liquid: [ ] g

g. Calculate the density of the unknown liquid: [ ] g/mL

5. Question Details Density of Unknown Solid [1761016]

a. Enter the mass of the unknown solid: [ ] g

b. Enter the volume of the unknown solid: [ ] mL

c. Calculate the density of the unknown solid: [ ] g/mL

6. Question Details How to round SF calculations [3416056]

Describe in a full sentence how to round the sum or difference between two measurements using proper significant digits.

Describe in a full sentence how to round the product or quotient between two measurements using proper significant digits.

Assignment Details

Name (AID): **01b Measurement Lab (1806288)**
Submissions Allowed: **7**
Category: **Homework**
Code:
Locked: **Yes**
Author: **Ryan, Matt (** mryan@allsaintsschool.org **)**
Last Saved: **Sep 12, 2017 09:08 AM CDT**
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