

Density of a Liquid Lab

Purpose

To investigate the properties of mass, volume and density of a liquid.

Materials

3 Unknown liquids
3 Graduated cylinders
1 Scale

Procedure

1. Find the mass of each graduated cylinder (empty) and record in Table 1.
2. Carefully measure the same amount of each unknown liquid and record the volume in Table 1.
3. Measure the total mass of the liquid and graduated cylinder and record in Table 1.
4. Calculate the mass of the liquid, and record in Table 1.
5. Calculate the density of liquids 1, 2 and 3 and record in Table 1.

Observations

Table 1: Data Table of Mass, Volume, and Density

	Mass (g) (graduated cylinder)	Total Mass g (liquid & cylinder)	Mass (g) of Liquid (total - cylinder)	Volume (mL)	Density (g/mL) $D = \frac{M}{V}$
Liquid 1					
Liquid 2					
Liquid 3					

Discussion

Using the densities of various liquids in Table 2, what are the identities of the three liquids?

Record answers in Table 3.

Table 2: Densities of Various Liquids

Liquid	Density (g/mL)
Rubbing Alcohol	0.79
Vegetable oil	0.92
Water	1.00
Salt Water	1.25
Glycerol	1.26
Corn Syrup	2.16

Table 3: Identities of the Three Unknown Liquids

	Identity of Unknown Liquid
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Liquid 1	
Liquid 2	
Liquid 3	