

Density of Liquids Lab

Name _____ Date _____ Period ___ Group ___

Problem: After calculating the density of a specific liquid, like the ones in this lab, could this help you to identify which liquid it is, if you are also given a list of known liquids and their densities?

Hypothesis : _____

Variables: By the time you finish this experiment, you will need to identify the different types of variables present in this investigation. Consult your notes for definitions of the types of variables.

Independent Variables: _____

Dependent Variables: _____

Controlled Variables: _____

Procedures:

1–Measure the mass of an empty graduated cylinder and record its mass in the chart below. **Make sure it is dry before massing it.**

2–Get from your teacher, between 5 and 10 ml of one of the liquids into the graduated cylinder and record its volume and mass below. Return the liquid to the teacher for recycling when you are done.

Remember to measure and record the volume before returning the liquid !

3–Use this data, to calculate the liquids mass, and then the liquids density, recording each of them in the chart below.

Repeat the above method for each of the other two liquids.

Materials: 10 ml graduated cylinder, Triple Beam Gram balance, liquids 1, 2, and 3

Safety: General. All liquids will be recycled for reuse by other classes.

Observations:

Liquid	Mass of Empty cylinder in grams (to .01g)	Mass of Liquid and cylinder in grams (to .01g)	Mass of Liquid in grams (to .01g)	Volume of Liquid in ml (cm ³) to 0.1 cm ³	Density of Liquid in g/cm ³ to 0.1 g/cm ³
1					
2					
3					

1. Assume for this question that the three liquids each have a different density. What would happen to the density of liquid 2, if some of liquid 1 was still in the graduated cylinder when you filled it with liquid 2 ?

2. Are the three liquids the same or different, and if they are the same, which *ones* are the same ? Explain your reasoning for either of the two results .

Class Results: Record all Densities to 1 decimal place

Group	Density of Liquid 1	Density of Liquid 2	Density of Liquid 3	Group	Density of Liquid 1	Density of Liquid 2	Density of Liquid 3
1				10			
2				11			
3				12			
4				13			
5				14			
6				15			
7							
8				Data Range			
9				Mode s			

Substance A density is 0.79 g/cm³

Substance B density is 1.0 g/cm³

Substance C density is 1.19 g/cm³

