

CHEM 1105: THE DENSITY OF SOLIDS AND LIQUIDS

Name: _____ Date: _____ Section _____

Objective:

Procedure:

As in Kwantlen Chemistry 1105 lab manual, pages _____.

Observations:

Data Part 1: Density of Solids

Table 1. Part 1: Density of Solids: **Mass of Objects**

Tray number: _____	Object 1	Object 2	Irregularly Shaped Object
Mass of object and boat using triple beam or top loading balance			
Mass of empty boat using triple beam or top loading balance			
Mass of object using triple beam or top loading balance			
Mass of object and boat using analytical balance			
Mass of empty boat using analytical balance			
Mass of object using analytical balance			

Table 2. Part 1: Density of Solids: Volume of Irregular Object

Volume of Water in Cylinder Before Adding Rock	Volume of Water in Cylinder After Adding Rock	Displacement of Water	Therefore Volume of Rock

Table 3. Part 1: Density of Solids: Volume of Regular Objects

	Object 1	Dimension	Object 2	Dimension
Shape of Object				
Dimension 1 by ruler				
Dimension 1 by caliper				
Dimension 2 by ruler				
Dimension 2 by caliper				
Dimension 3 by ruler				
Dimension 3 by caliper				

Data Part 2 : Density of Liquids

Table 4. Part 2: Mass of Liquid

Mass of 50 mL Erlenmeyer flask and stopper (g)	
Mass of flask, stopper, and first 15 mL aliquot (g)	
Mass of flask, stopper, first and second 15 mL aliquots (g)	

Calculations:

Show all your calculations for Part 1 directly in the tables below.

Table 5. Part I: Density of Solids: **Volume of Regular Objects**

Object 1 volume by ruler
Object 1 volume by caliper
Object 2 volume by ruler
Object 2 volume by caliper

Table 6. Part I: **Density of Regular Objects**

Object 1 density using triple-beam/top-loading balance and ruler
Object 1 density using analytical balance and ruler
Object 1 density using triple-beam/top-loading balance and caliper
Object 1 density using analytical balance and caliper
Object 2 density using triple-beam/top-loading balance and ruler
Object 2 density using analytical balance and ruler
Object 2 density using triple-beam/top-loading balance and caliper
Object 2 density using analytical balance and caliper

Table 7. Part I: **Density of Irregular Object**

Irregular object density using triple-beam/top-loading balance
Irregular object density using analytical balance

Calculations:

Show all your calculations for Part 2 below. For which calculations to include see the “Treatment of Data” section in your manual.

Results:

Table 8. Results

Tray number: _____	Object 1	Object 2
Shape of object		
Calculated density from the most precise instruments		
Calculated density of rock from the most precise instruments		
Calculated density of liquid		

Questions

Attach any assigned questions.