

EXPERIMENT # 3DENSITY
REPORT FORMPurpose:Data & Observation:

(All data should be recorded with the proper units and number of significant digits)

Part 1: Density of a Solid

Unknown number: _____

Mass of solid unknown: _____

Volume of water in graduated cylinder: _____

Volume of water & solid unknown: _____

Volume of solid unknown: _____

Density of solid unknown: _____

Identity of solid unknown: _____

Percent error: _____

(show calculations below)

EXPERIMENT # 3***Part 2: Density of a Liquid***

Mass of pycnometer: _____

Volume of pycnometer: 25.00 mL

Mass of pycnometer & water: _____

Mass of water: _____

Density of water: _____

Density of water (true value): 1.000 g/mLPercent error: _____
(*show calculations below*)

EXPERIMENT # 3***Part 3: Density of a Liquid & Percent Composition***

Sample	Volume (Reading to nearest 0.1 mL) of the liquid sample	Mass (reading to nearest 0.01 g) of the liquid sample	Density of the sample (g/mL)
Pure water			
4.0% NaCl			
8.0% NaCl			
12.0% NaCl			
16.0% NaCl			
Unknown sample _____			

Part 3: Graphing Percent Composition vs. Density

- Prepare a graph of percent composition (x-axis) vs. density (y-axis) for the known samples using the Excel template available on profpaz.com.
- Use the measured density of the unknown sample to extrapolate the concentration of the unknown sample to 0.1% from the graph prepared by Excel. Show your extrapolation clearly on the graph, and report the concentration value obtained below to 0.1%.

Unknown number: _____

Concentration of unknown from Excel graph (to 0.1%) _____

