Chemistry 2201 Lab: Density

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

Determined by direct measurement of mass and volume of a liquid.

Compare the precision of three methods:

A. burette

B. pipette

C. density bottle.

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Precision determined by comparing the confidence interval. For example:

Method 1: D = 1.01 g/mL ± 0.02 g/mL
Method 2: D = 1.008 g/mL ± 0.006 g/mL

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Determining the Linear relationship between Density and Concentration of NaCl.

$$Y = ax + b$$

$$\text{Density} = a \cdot [NaCl] + b$$

Method 1: Graphical(Excel)

Method 2: Least-squares