

Name _____ Desk _____

Date _____ Laboratory Instructor _____

REPORT SHEET FOR EXPERIMENT 1

BASIC LABORATORY TECHNIQUES

A. The Meterstick

Length of this lab book _____ in. _____ cm _____ mm _____ m

Width of this lab book _____ in. _____ cm _____ mm _____ m

Show by using an equation (including units) that the above measurements are equivalent.

Area of this lab book (show calculations) _____ cm^2

C. The Graduated Cylinder

Volume of water in graduated cylinder _____ mL

Volume of water contained in 125-mL Erlenmeyer flask _____ mL

D. Relationship of Temperature Scales ($^{\circ}\text{F}$ versus $^{\circ}\text{C}$)

Celsius equivalent of 40°F from curve _____

Relationship of $^{\circ}\text{F}$ to $^{\circ}\text{C}$ (show calculations) _____

Celsius equivalent of 40°F from equation _____

E. The Thermometer and Its Calibration

Temperature of water-and-ice mixture _____ °C
Temperature of boiling water _____ °C
Atmospheric pressure _____ mm Hg
True (corrected) temperature of boiling water _____ °C

F. Using the Balance to Calibrate Your 10-mL Pipet

Weight of a penny _____ g = _____ mg
Temperature of water used in pipet _____ °C
Corrected temperature _____ °C

	Trial 1	Trial 2	Trial 3	
Weight of Erlenmeyer plus ~10 mL H ₂ O (gross wt)	_____	_____	_____	g
Weight of Erlenmeyer (tare wt)	_____	_____	_____	g
Weight of ~10 mL of H ₂ O (net wt)	_____	_____	_____	g
Volume delivered by 10-mL pipet (show calculations)	_____	_____	_____	mL

Mean volume delivered by 10-mL pipet _____ mL
(show calculations)

	Trial 1	Trial 2	Trial 3
Individual deviations from the mean	_____	_____	_____
Average deviation from the mean (show calculations)	_____ mL		

Volume delivered by your 10-mL pipet _____ mL \pm _____ mL

QUESTIONS

1. A man who is 5 ft 5 in. tall weighs 140 lb. What is his height in centimeters and his weight in kilograms?
2. Determine the boiling point of water at 702.1 mm Hg.
3. A pipet delivers 9.98 g of water at 23°C. What volume does the pipet deliver?
4. A pipet delivers 10.02, 10.12, 10.08, and 10.06 mL in consecutive trials. Find the mean volume and the average deviation from the mean.
5. A 116-mg sample was placed on a watch glass that weighed 7.965 g. What is the weight of the watch glass and sample in grams?



