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Lab 1 Notebook

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1UCSC

1 Works for me

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UCSC BME 22L

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Abstract

Prelab

1. Give the volume range of p100 and p1000.
2. For each pipette look up the relative and absolute error for 3 different volume settings.
3. Look up water density: Weight per volume (g/ μ L).
4. Give an example in which gel electrophoresis is used.
5. Name the two pipetting techniques.
6. How many ways are there to correctly load a microcentrifuge?

Lab Results:

Water Trial Chart

Pipet model used: _____

This graph is associated with only 1 micropipette used; so make three of these.

Trial	volume extracted (uL)	Mass weighed (g)
1		
2		
3		
4		
5		

Calculate the Standard Deviation and Percent Error

$$\text{Standard Deviation} = \left(\frac{\sum (x - y)^2}{n - 1} \right)^{1/2}$$

For help with Standard deviation look [here](#).

x = summation of individual values

y = mean of all values

n = # of trials

$$\% \text{ Error} = \left(\frac{x - z}{z} \right) (100)$$

For help with Percent Error look [here](#).

x = mean value

z = set volume (intended volume on scale)

Mean= ____ % Error= ____ S.D.= ____

Does your micropipettes fall under regular systematic error? If not, inform a teacher or TA they can help with recalibration. Look at the chart at the end of the 'Introduction to Materials' file for help.

Attach a picture of the liquids you have spun in your Microcentrifuge and give the name of liquids used. In your own words describe what happened to the liquids.

Post Lab

Write a short experiment where you use at least 2 of the components learned in this lab.

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