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# Lab 1 Notebook

Kamron Mojabe[1]

[1]alyss

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Alyssa Ayala

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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/µL).
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**

**S**tandard **D**eviation= $(((x-y)^2))/(n-1))^{(1/2)}$

x = summation of individual values
y = mean of all values
n = # of trials

**% Error** = $((x-z)/z)(100)$

x = mean value
z = set volume (intended volume on scale)

Mean= _____ % Error= _____ S.D.= _____

Use the density(g/m^3) conversion from your prelab to predict the weight of each volume pipetted.

**Attach a picture of the liquids you have spun in your Microcentrifuge and give the name of liquids used.**

**Post Lab**

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