

# [Rafat hypothesized that the measuring device with](https://assignbuster.com/rafat-hypothesized-that-the-measuring-device-with/)

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IslamBiology 1107L Jan 30, 2018 Professor Andrea DavisLab: The Metric System- Part DHypothesis: I hypothesized that the measuring devicewith the most dashes will be the most accurate measurement. Graduate cylinder  Prediction: I predict that the graduated cylinder willhave the most accurate measurement than the other glasses. I also predict the40ml will be the least accurate because its not meant to hold 100ml of water Procedure:            Materials: water, graduated cylinder, Erlenmeyer flask, volumetric flask, and a 40mlbeaker. 1.    Beginthe experiment, by weighing the 2.    balanceand tare the scale. 3.    Fillthe graduate will 100ml of water.

Record. Repeat two more times. 4.

Weightthe Erlenmeyer flask, place it on the balance and tare the scale. 5.    Fillthe Erlenmeyer flask will 100ml of water, measure of the scale. Record. Repeattwo more times. 40ml beaker. Place the beaker on the balance, tare on thescale.

6.    Fillthe beaker with 40ml of water. Record. Then multiple it by 2. 5. Record.

Repeattwo more times. 7.    Weightthe graduated cylinder. Place it on the8.    Lastly, weight the volumetric flask. Place it on the balance, tare on the scale, record. 9.    Fillthe volumetric flask with 100ml, measure on the scale.

Record. Repeat two moretimes. 10. Rememberall four measurements should have three trails. Get the average of themeasurement devices.

Data:   Volume Flask Beaker 40ml Erlenmeyer Flask Graduate Cylinder Trail 1 99. 37g 38. 93×2. 5 97.

325 98. 20g 98. 15g Trail 2 99. 24g 41. 41×2. 5 103.

525 99. 70g 98. 29g Trail 3 99. 62g 40.

12×2. 5 100. 3 100. 24g 98. 66g Average 99.

41g 100. 38g 99. 38g 98. 36g   Accuracy: From the data collectedin this experiment, the volumetric flask proved to be the most accurate withoutgoing over. With going over the 40ml would be the most accurate, but I wouldsay the volumetric is the more accurate because it did not go over.  The order of the most accurate to leastwithout going over 100ml would be volume flask (99.

41), Erlenmeyer flask(99. 38), graduated cylinder (98. 36), and then 40ml beaker (100. 38). In terms ofprecision the order of the most precise to the least precise is volume flask, Erlenmeyer flask, graduated cylinder, and 40ml beaker. From my trails theaccuracy and precision are in the same order. Support: My experiment did notsupport my hypothesis or my prediction.

Both my hypothesis and prediction statedthat the graduated cylinder will be more accurate and precise because it hasmore dashes, so it will be easier to measure the water. Conclusion: From the results of theexperiment I concluded that volumetric flask is the most accurate and preciseout of the four measuring devices. My hypothesized and my predication statedthat the graduated cylinder with the most dashes would be the most accurate andprecise, but my data is not support this.