

Rafat hypothesized that the measuring device with

[Science](#), [Biology](#)



Rafat R.

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System- Part D Hypothesis: I hypothesized that the measuring device with the most dashes will be the most accurate measurement. Graduate cylinder

Prediction: I predict that the graduated cylinder will have the most accurate measurement than the other glasses. I also predict the 40ml 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 40ml beaker. 1. Begin the experiment, by weighing the 2. balance and tare the scale. 3. Fill the graduate will 100ml of water.

Record. Repeat two more times. 4.

Weight the Erlenmeyer flask, place it on the balance and tare the scale.

5. Fill the Erlenmeyer flask will 100ml of water, measure of the scale.

Record. Repeat two more times. 40ml beaker. Place the beaker on the balance, tare on the scale.

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

Record.

Repeat two more times. 7. Weight the graduated cylinder. Place it on

the 8. Lastly, weight the volumetric flask. Place it on the balance, tare on the scale, record. 9. Fill the volumetric flask with 100ml, measure on the scale.

Record. Repeat two more times. 10. Remember all four measurements should have three trails. Get the average of the measurement devices.

<https://assignbuster.com/rafat-hypothesized-that-the-measuring-device-with/>

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 collected in this experiment, the volumetric flask proved to be the most accurate without going over. With going over the 40ml would be the most accurate, but I would say the volumetric is the more accurate because it did not go over. The order of the most accurate to least without 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 of precision the order of the most precise to the least precise is volume flask, Erlenmeyer flask, graduated cylinder, and 40ml beaker. From my trails the accuracy and precision are in the same order. Support: My experiment did not support my hypothesis or my prediction.

Both my hypothesis and prediction stated that the graduated cylinder will be more accurate and precise because it has more dashes, so it will be easier to measure the water. Conclusion: From the results of the experiment I concluded that volumetric flask is the most accurate and precise out of the four measuring devices. My hypothesized and my predication stated that the

graduated cylinder with the most dashes would be the most accurate and precise, but my data is not support this.