Post Lab Questions

1. Why is it important that the small beaker that you are weighing is clean and dry?

It is important so that it doesn’t add extra weight to the measurements and cause the gather data to be inaccurate.

1. How did the volume in the beaker compare to the volume of the measuring device?

The volume of the beaker will be less than the volume of the measuring device because there will be water loss between the measuring device and the beaker.

1. Which is larger, average deviation or standard deviation?

The standard deviation is a larger number.

1. Why is it prudent to use the same analytical balance?

It’s very important to use the same analytical balance so that there are fewer variables in determining the exact weight of the beaker. Many scales might need calibration or their calibration could be different.

1. According to your data, which dispending method had the greatest accuracy? Why do you think this piece of glassware was so accurate?

The glassware with the greatest accuracy was the buret. The data shows the average mass of water is 9.82 (g), which is the closet to 10 (g). The buret was most likely the most accurate because it had the least amount of variables when gathering and dispensing the water.

1. According to your data, which dispending method had the greatest precision? Why do you think this piece of glassware was so precise?

The measuring device with the greatest precision was the graduated cylinder. Most likely it was the greatest precision since it was the measuring device that was the easiest to read. The graduated cylinder has the most precision because it has the least deviation of water mass between all the glassware.

1. In a rush, a student only measure the mass of the empty beaker once before beginning the experiment and one more time after the entire experiment was finished. The mass o the empty beaker was found to be 0.123 (g) less at the end of the experiment. What happened?

The scale could have been uncalibrated during the experiment. The student also could have not calibrated the scale before the experiment to get a more accurate weight of the beaker.