

Notes for Experiment 18 - Chem 1A

Clarification for Part 2, step 6, on page 80 of the lab manual:

- When using a graduated pipet, each portion of water or copper solution that you deliver will require two volume readings: the initial and the final volume.
- After rinsing the pipet three times with the solution to be used in it as described in steps 4 and 5 on page 80, fill the pipet to slightly below the 0.0 mL marking. Read the initial volume reading of the solution in the pipet, then deliver the approximate needed amount of liquid to the test tube, and measure the final volume reading. Taking the difference will give you the net volume used for that solution in that test tube.
- All volume measurements should be to ± 0.01 mL. *Make sure you have two decimal places on all volume readings.*

For each test tube, you will need initial, final, and net volume readings for both water and Cu^{2+} solution.

Here is a suggested data table for this part of the experiment.

	mixture 2		mixture 3		mixture 4		mixture 5	
	Cu^{2+}	H_2O	Cu^{2+}	H_2O	Cu^{2+}	H_2O	Cu^{2+}	H_2O
initial V reading (mL)								
final V reading (mL)								
net volume delivered (mL)								

Saving solutions:

You will not be able to keep the volumetric flasks between lab periods, since other classes will need to use them too.

In order to save your standard solution, choose a flask from your locker that looks clean. Rinse it three times with small portions of your standard solution, making sure to swirl the solution so that it coats the inner wall of the flask each time. (We are trying to make sure that any droplets of water or other impurities are rinsed away. We want to make sure

not to dilute the standard solution in any way, so that it maintains its concentration to four significant figures.)

Make sure to cover and seal all of the solutions you save with parafilm. Keep them in your locker until the next lab period.

Absorbances:

Later in the experiment, when you are measuring absorbances, make sure to measure the absorbance of the standard solution and of each of the mixtures 2-5. You will also need the absorbance of the unknown solution.

Don't forget to measure the absorbance of the standard solution!