

VALENCIA COLLEGE

Chemistry

Lab Technique 6: Using a Volumetric Flask

A volumetric flask is a piece of glassware calibrated to contain a precise volume at a particular temperature. It is used in the laboratory to prepare solutions with a high precision.

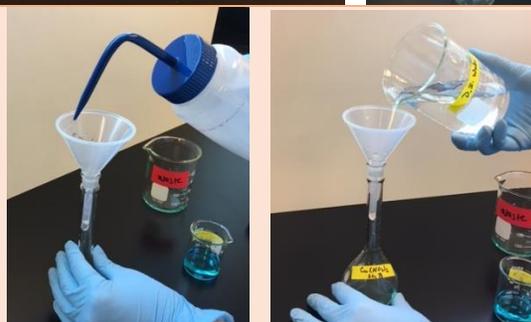
Measure the amount of the substance needed.

- Solid: use a balance. See Technique 2.
- Liquid or solution: use appropriate glassware. See Techniques 4, 5 or 7.

Use a small funnel to pour the measured solid or liquid into the volumetric flask. If it is a liquid, use a stirring rod to direct the flow.

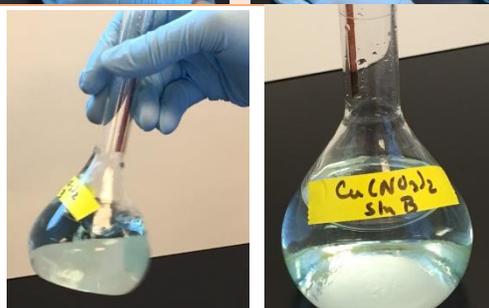


Rinse the funnel with deionized water, and add more water until the flask is approximately half-filled. (You might find it easier to pour deionized water using a beaker.)



Swirl to mix. Ensure that the entire solid dissolves.

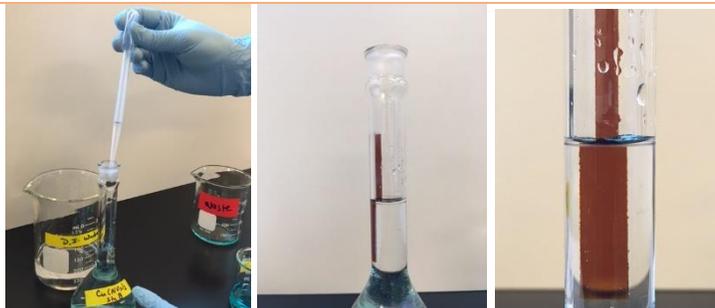
Let it settle.



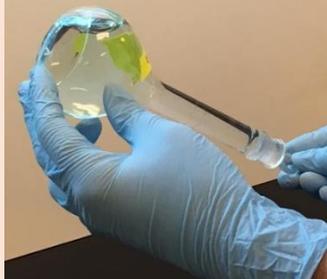
Add more water until the liquid is approximately 1 cm **under** the calibration mark (scorched ring or colored ring around the neck).



Then, fill to the calibration mark using a transfer pipet.



Place stopper on volumetric flask. Holding stopper tightly in place, gently invert the flask to mix well.



Note: If you fill past the calibration mark, you must discard the solution and start over since the volume cannot be removed without removing some of the solute.