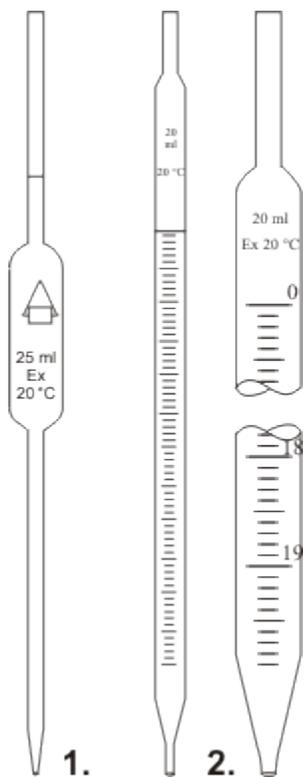


## Volumetric Glassware Use – volumetric pipet

### The Volumetric Pipet

Volumetric pipets also measure volumes with precision and accuracy. But unlike a buret, a regular pipet can only measure one volume, depending on its size. For this reason, regular pipets have only one calibration mark. A pipet bulb is used to draw solution up into the pipet, and gravity is used to drain it. Graduated pipets are calibrated to deliver a variety of small volumes.



**Figure 1:** Volumetric pipets; 1: Regular pipet 2. Graduated pipet

#### *Measuring liquids with a pipet*

Begin with the pipet that has been cleaned. Squeeze a pipet bulb and carefully place it on the end of the pipet. Inset the tip of the pipet into a beaker containing the solution to be pipetted. Slowly release the pressure on the pipet bulb and draw the solution into the pipet. When the pipet is half full, quickly remove the pipet bulb and place your index finger over the end of the pipet. Remove the tip of the pipet from the solution and tilt the pipet to rinse the inside walls. As with the buret, do not cover the open end of the pipet with your finger

while rinsing the walls! Place the tip over an empty beaker and allow the solution to drain into the beaker. Repeat this rinsing twice to fully condition the pipet.

After the pipet has been conditioned, using the bulb, draw the solution into the pipet above the calibration mark etched in the neck of the pipet. Again, quickly remove the bulb and place your index finger over the end. The meniscus should be above the etched line. Hold the tip of the pipet against the bottom of the container and gently ease the pressure of your index finger. Allow the level to fall until the bottom of the meniscus is even with the etched mark. Increase pressure with your index finger to hold the solution at that level. Move the pipet to the container to which you are transferring the solution, and release your finger and allow the solution to drain freely. When all the solution has drained, touch the tip of the pipet to the side of the container, to remove the last drop, and continue. (Note: do not blow the solution out of the tip of the pipet. It has been calibrated to include the small volume that remains in the tip after all the solution has drained.)

Check out a video about how to use pipets:

[http://www.youtube.com/watch?v=4y\\_M1N4-EjM](http://www.youtube.com/watch?v=4y_M1N4-EjM)

<http://www.youtube.com/watch?v=qorl6rKLMRs>