

GLASSWARE

Burets, 2-4

Though tolerance is 0.05 mL estimate to 0.01 mL **after** all air bubbles are expelled. The buret on the left reads 9.68 mL. Burets are calibrated to deliver (TD) an indicated volume.

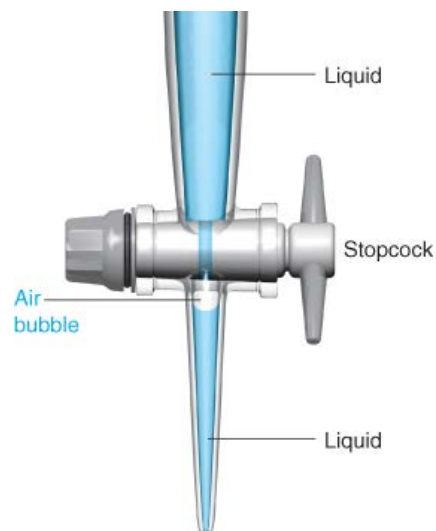
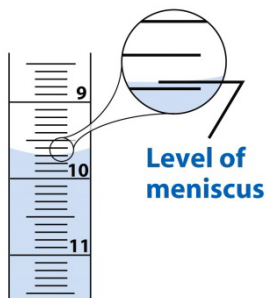
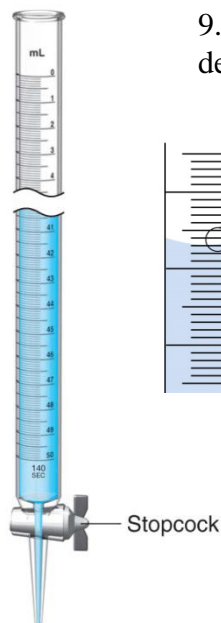


Table 2-2 Tolerances of Class A burets

Buret volume (mL)	Smallest graduation (mL)	Tolerance (mL)
5	0.01	±0.01
10	0.05 or 0.02	±0.02
25	0.1	±0.03
50	0.1	±0.05
100	0.2	±0.10

Volumetric Flasks, 2-5

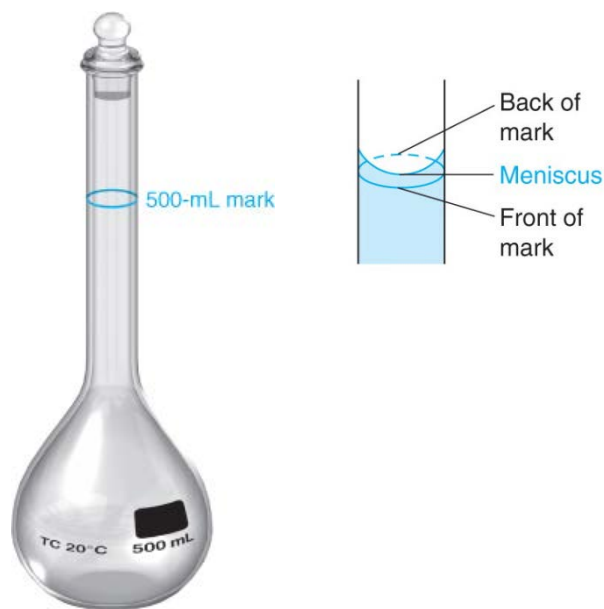


Table 2-3 Tolerances of Class A volumetric flasks

Flask capacity (mL)	Tolerance (mL)
1	±0.02
2	±0.02
5	±0.02
10	±0.02
25	±0.03
50	±0.05
100	±0.08
200	±0.10
250	±0.12
500	±0.20
1 000	±0.30
2 000	±0.50

Volumetric glassware is calibrated to contain (TC) an indicated volume.

Pipets, 2-6

The (a) transfer pipet and the (b) measuring pipet (generally referred to as a Mohr pipet) are both calibrated to deliver (TD) an indicated volume.

The TC and TD volumes also require a specified temperature which is usually 20°C.

Note the proper spelling of buret and pipet (not burette and pipette, we are not living in France).

Table 2-4 Tolerances of Class A transfer pipets

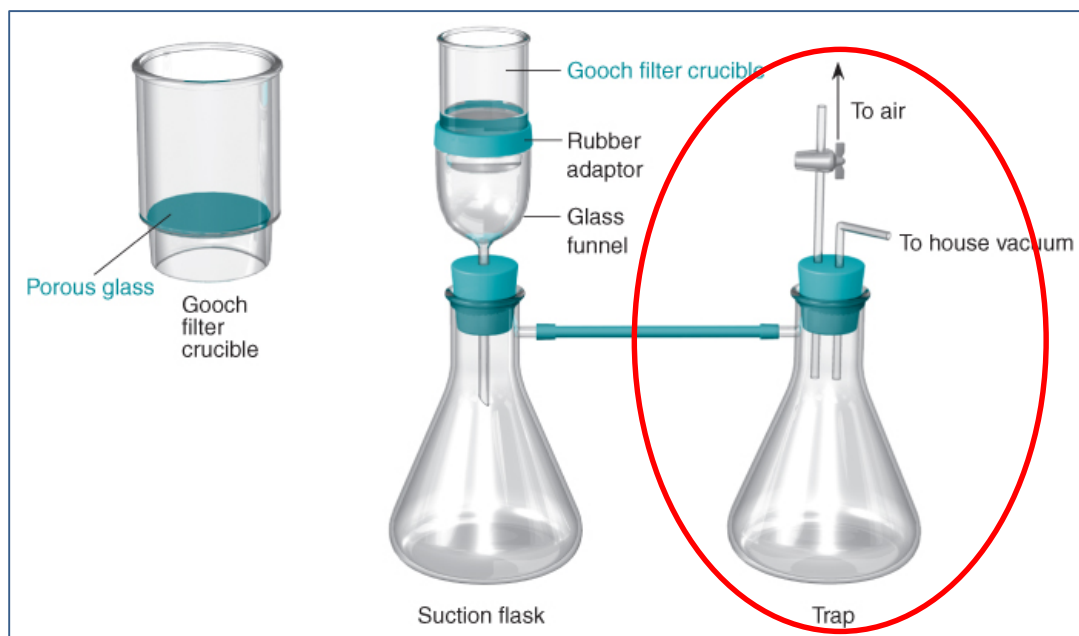
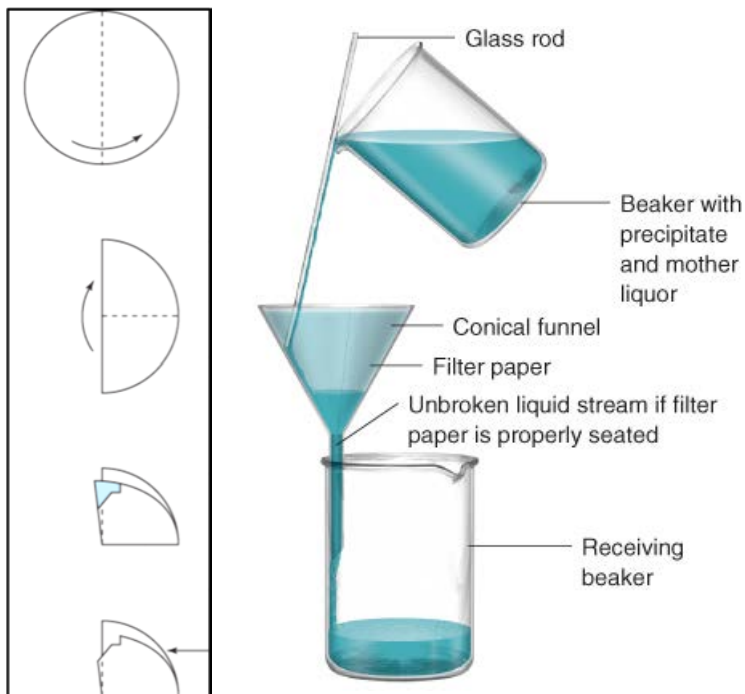
Volume (mL)	Tolerance (mL)
0.5	±0.006
1	±0.006
2	±0.006
3	±0.01
4	±0.01
5	±0.01
10	±0.02
15	±0.03
20	±0.03
25	±0.03
50	±0.05
100	±0.08



Filtration, 2-7 – read over for first gravimetric experiment, Exp. 2

Techniques of analytical filtration will begin with the first two experiments, Exps. 2 and 3. In gravimetric analysis one wants to quantitatively recover as much of the precipitate as is theoretically possible, often after filtering. Major approaches use either the gravity filtration pictured on the right, using properly folded filter paper, or suction filtration. In the latter a faucet aspirator will replace the trap.

When using a conical funnel, the given manner of folding filter paper will allow the paper to fit snugly against the funnel to enable more rapid filtration.



connected directly to aspirator – no trap

Drying, 2-8

The gravimetric experiments require “bringing to constant mass” where the cooling step will be done in a desiccator.

Careful analytical work employing primary standards will require you to dry the standards, again a desiccator will be used.

