

How to use pipets with fillers

Glass pipets are trickier to use (but less treacherous) than micropipettors, but if you're within their range – volumes of 100's of μl or more – you can do a lot more with a glass pipet, if you know what you're doing. For example, if you have 15 samples, 5 requiring 400 μl of detergent and 10 requiring 300 μl , you can use a 5 ml pipet and in one suck get the job done while your lab mate with the micropipettor is still dialing the numbers.

However, using them is definitely an acquired skill. There are different ways of sucking up liquid into a glass pipet and spitting it out. Students generally prefer pipet pumps, but (in my opinion) rubber bulbs offer greater control.

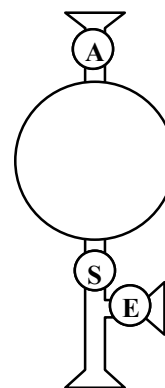
A. How to use pipets with pipet pumps

To use a pipet pump, press the plunger almost all the way down, until it is about a half centimeter above the body of the pump. Then attach a pipet to the bottom of the body: use the small blue pumps for 1 ml and 2 ml pipets and the large green pumps for 5 ml and 10 ml pipets. If you are using a sterile pipet, tear a hole at the top of the plastic or plastic/paper wrapper and attach the pipet to the pump without otherwise removing the wrapper. Remove the wrapper only when you're ready to use the pipet. From the moment the pipet is removed from its wrapper, you are responsible for its sterility. You should be aware at all times where it is, as if it were an appendage of your body.

Fill the pipet by submerging the tip in the liquid and using the plastic wheel to dial the plunger upward until the liquid reaches the desired volume marked on the pipet. To deliver the liquid, dial the plunger down until the desired volume is reached (delivered volume = beginning volume - end volume) or deliver the entire volume by dialing the plunger all the way to the bottom.

B. How to use pipets with rubber bulbs

To use a rubber bulb (see figure at right), squeeze the large sphere and, simultaneously, pinch the neck at **A** with two fingers to get rid of some of the air (some bulbs don't have buttons at **A** – these you just squeeze). Then attach the pipet to the bottom hole of the bulb. Fill the pipet by submerging the tip in liquid and pressing the **SUCK** button (**S**) on the vertical tube of the bulb, until the liquid reaches the desired volume marked on the pipet. To deliver the liquid, press the **EMPTY** button (**E**) on the horizontal tube of the bulb, until the desired volume is reached. If you want to expel the entire volume, you'll find that some liquid invariably gets hung up at the bottom of the pipet. You can deliver the last drop by pushing on the hole at the end of the horizontal tube while simultaneously pressing **E**. You will eventually be able to do this with one hand, but it takes some practice.



SQ5. Do you already feel comfortable using glass pipets?