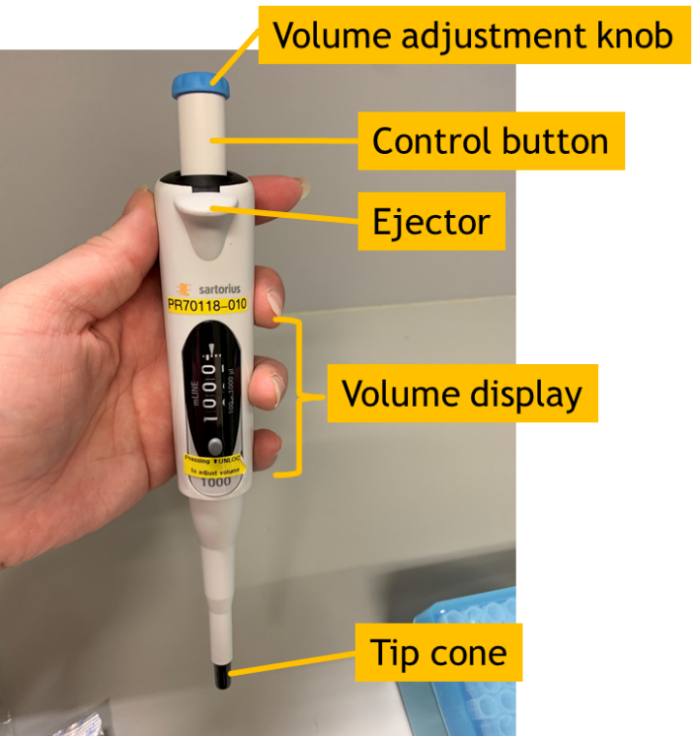
**Auto-pipette**

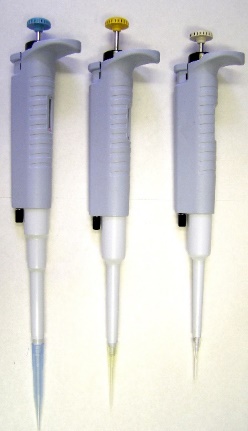
***Points to note****:*

*The commonly used units for volume in auto-pipettes are milliliters (mL) and microliters (µL), where 1 milliliter (mL) = 10-3 liters(L) = 1000 microliters (µL); 1 microliter (µL) = 10-6 liters(L)*

**Parts of auto-pipette**

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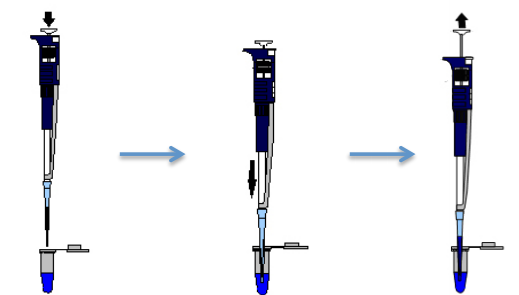
**Steps:**



1. Look at the top of the control button to see the pipette size. Choose the auto-pipette which suits the volume you need to pipet.

|  |  |
| --- | --- |
| Volume to be pipetted | Model of auto-pipette to be used |
| 20-200μL | yellow P200 pipette |
| 200-1000μL | blue P1000 pipette |
| 500-5000 μL | green P5000 pipette |

1. Fit the tip cone firmly into a pipette tip (of appropriate size). Make sure they are securely attached.
2. Turn the volume adjustment button gently to choose the volume required. We can read the volume display for different models of auto-pipette as shown in the table below.
3. Press the control button down to the first stopping point. Do not push the control button all the way down.
4. Only insert the plastic pipette tip into the water sample you wish to pipet.
5. Once the tip is suspended in the water sample, slowly release the control button to its starting point. Then, remove the plastic tip from the liquid.

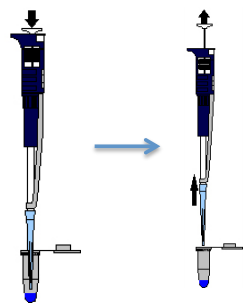


Step 4:

Step 5:

Step 6:

1. Insert the pipette tip into the target container (e.g. centrifuge tube). Push the control button down all the way. (The button should pass the first stopping point and reach the second stopping point where you cannot push the control button down any further.) The water sample should now be pipetted into the target container. Do not release the control button until all the water sample is released.
2. Lift the tip from the container. Once the tip is removed from the container, you may release the control button to its starting point.



Step 7:

Step 8:

1. Usually, the pipette tip is for single-use to avoid contamination. To dispose of it, press down on the ejector to release the tip into a bag /a beaker.

***Points to note****:*

* Never attempt to pipet a volume outside of the specified volume range for each auto-pipette.
* Avoid touching plastic pipette tips with your hands, or to the working bench, or any other objects that could cause contamination.
* Usually the pipette tip is for only single-use to avoid contamination.
* Use gentle and controlled movements when using the control button, otherwise, the auto-pipette will be damaged and its measurement accuracy will be adversely affected.

*Reference:* <https://sites.psu.edu/nicolehume/files/2013/12/micropipette-19e15kr.pdf>