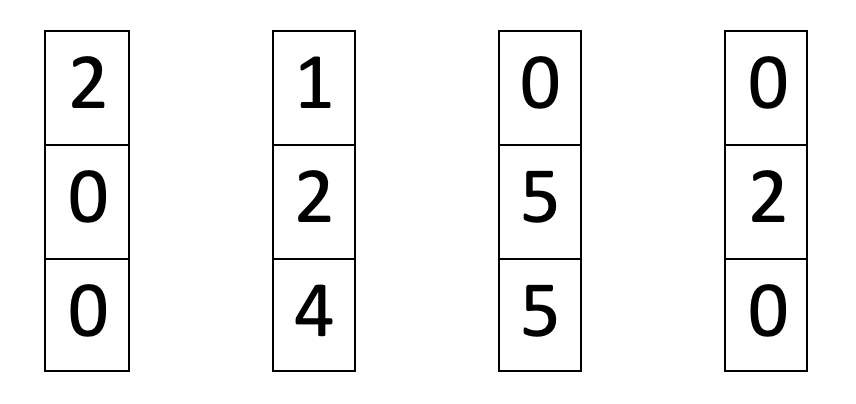
### **Lab 1.1 How to Use a Micropipette**

1. If the p20 micropipette has a volume lock, *unlock* it to change the volume.

2**.** The volume on the micropipette is changed by turning either the plunger or the dials in the middle. **Do not exceed the maximum (20.0µL ) or the minimum (2.0µL) limits of the p20 micropipette.** Practice setting the p20 micropipette volume to the following volumes:



20.0µL 12.4µL 5.5µL 2.0µL

3. Using the p20 micropipette and a new tip, *EACH* student should pipet the four volumes of red dye [RD] into the circles on the laminated sheet.

To aspirate the solution, press the plunger to the first stop before placing the tip into the RD. Slowly let the plunger up.

To dispense the solution, press the plunger to the second stop over the circle on the sheet. Discard the tip into the WASTE container.

Try to keep the droplet within the circle.

4. Record the size of the droplets.

5. Wipe the template clean with a paper towel.

**Lab 1.2A Loading Wells in the Practice Gel**

1. Place the practice gel into a weigh boat.

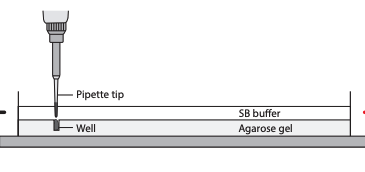
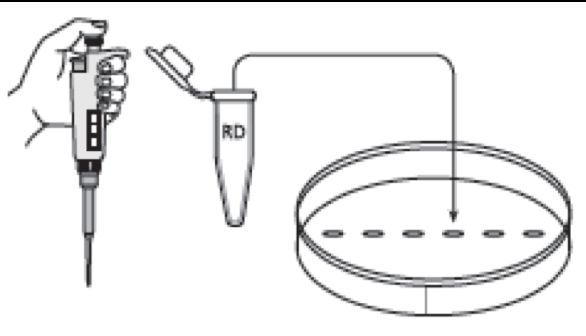
2. Fill the gel with enough water to cover the wells completely. The practice gels will permanently stain if no water is added before loading with red dye [RD].

3. If there are any bubbles inside the wells, use a pipette tip to pull them out. The red dye will not be able to fill the well if there is a bubble present.

4. Using the p20 micropipette with a new tip, load 5-8µL of red dye into a well.

The pipette tip should enter the surface of the water but not the well itself. If this gel was made of agarose it would be easily ripped. Only depress the plunger to the first stop and hold there before pulling the tip out. When dispensing samples into wells only go to the first stop so as not to force the sample out of the well by creating bubbles.

Repeat with several wells.

5. Discard the pipette tip into the WASTE container. Rinse the gels and weigh boats with water and air dry.